Iowa Department of Natural Resources
Title V Operating Permit

Name of Permitted Facility: Lehigh Cement Company
Facility Location: 700 25th Street N.W.
Mason City, IA 50401
Air Quality Operating Permit Number: 04-TV-011
Expiration Date: July 28, 2009

EIQ Number: 92-3163
Facility File Number: 17-01-005

Responsible Official
Name: Verne A. Stuessy
Title: Plant Manager
Mailing Address: 700 25th Street N.W.
Mason City, IA 50401
Phone #: (641) 421-3400

Permit Contact Person for the Facility
Name: Rita Dunn
Title: Environmental Coordinator
Mailing Address: 700 25th Street N.W.
Mason City, IA 50401
Phone #: (641) 421-3459

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

Douglas A. Campbell, Supervisor of Air Operating Permits Section Date

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Abbreviations

acfm..... actual cubic feet per minute
CFR ..... Code of Federal Regulation
dscf…….dry standard cubic feet
dscm……dry standard cubic meters
^{o}F ..... degrees Fahrenheit
EIQ ..... emissions inventory questionnaire
ESP.....electrostatic precipitator
gr./dscf..... grains per dry standard cubic foot
gr./100 cf ..... grains per one hundred cubic feet
hp./hr……..horsepower hours
IAC ..... Iowa Administrative Code
IDNR ..... Iowa Department of Natural Resources
KWH……..kilowatts per hour
MVAC..... motor vehicle air conditioner
N/A.....not applicable
ng./dscm……..nanogram per dry standard cubic meter
NSPS ..... new source performance standard
ppmv..... parts per million by volume
lb./hr ..... pounds per hour
lb./MMBtu..... pounds per million British thermal units
MMcf./hr……million cubic feet per hour
scfm ..... standard cubic feet per minute
TEQ……toxicity equivalents
TPD.....tons per day
TPY ..... tons per year
TPH…….tons per hour
USEPA ..... United States Environmental Protection Agency
VMT/hr……..vehicle miles traveled per hour

Pollutants

PM ..... particulate matter
PM_{10} ..... particulate matter ten microns or less in diameter
SO_2 ..... sulfur dioxide
NO_x..... nitrogen oxides
VOC ..... volatile organic compound
CO ..... carbon monoxide
HAP..... hazardous air pollutant
D/F……..dioxins and furans

I. Facility Description and Equipment List

Facility Name: Lehigh Cement Company
Permit Number: 04-TV-011
Facility Description: Portland Cement Plant

Equipment List

A. Material Transfer Fugitive Emission Sources Subject Only to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule.

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP1	EU1	Railcar Unloading
EP7	EU7A	Limestone Transfer
EU14	EU14A	Clay Delivery and Distribution
	EU14B	Clay Transfer to Process
EP15A	EU15A	Raw Material Transfer-Clay Crushing System
EP15B	EU15B	Raw Material Transfer-Clay Crushing System
EP39-2	EU39-2	Gypsum/Anhydrite Bucket Transfer
EP40	EU40	Coal Crusher
EP56A	EU56A	Truck Loading - Limestone
EP57A	EU57A	Truck Loading - Clay
EP58A	EU58A	Coal Transfer
EU59A	EU59A	Sand Delivery & Unloading
	EU59B	Sand Transfer to Process
EP60A	EU60A	Clay Delivery & Unloading
	EU60B	Clay Transfer to Process
EP61A	EU61A	Clay Delivery and Unloading
	EU61B	Clay Transfer to Process

A. Material Transfer Fugitive Emission Sources Subject Only to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule (cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP62-1	EU62-1	Coal Transfer
EP63A	EU63A	Kiln Dust Unloading
EP73A	EU73A	Limestone Transfer to Process Pile at Crusher
EP74A	EU74A	Limestone Transfer to Process Pile at Crusher
EP75A	EU75A	Clinker Transfer to Craneway
EP76A	EU76A	Clinker, Gypsum, Slag Transfer

B. Storage Piles

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP14	EU14	Clay Storage Pile No. 1
EP58	EU58	Coal Storage Pile
EP59	EU59	Sand Storage Pile
EP60	EU60	Clay Storage Pile No. 2
EP61	EU61	Clay Storage Pile No. 3
EP63	EU63	Kiln Dust Storage Pile
EP73	EU73	Quarry Run Limestone Storage Ple
EP74	EU74	Quarry Run Limestone Storage Ple
EP75	EU75	Clinker Storage Pile
EP76	EU76	Raw Materials Storage Pile

C. Haulroads

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP56	EU56	Limestone Quarry Haulroad
EP57	EU57	Clay Quarry Haulroad
EP63B	EU63B	Kiln Dust Haulroad
EP80	EU80	Cement Haulroad-Cement Loadout to U.S. 65

D. Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP11	EU11	Raw Material Transfer-Apron Feeder to Collection Belt
EP18	EU18	Grinding Circuit-Raw Material Transfer
EP19	EU19	Raw Material Transfer to Homoginizing Silo
EP20	EU20	Raw Material Transfer-IBAU Bin Bottom Elevator
EP21	EU21	Raw Material Transfer-IBAU Elevator W to top Silo Conveyor
EP22	EU22	Raw Material Transfer-IBAU Elevator S to top Silo Conveyor
EP23	EU23	IBAU Bin S Top Elevator Raw Material Transfer
EP24	EU24	Raw Material Transfer
EP33	EU33	Outhaul Conveyor Transfer
EP34	EU34	Clinker Truck Loadout
EP35	EU35	Outhaul Conveyor Transfer to Clinker Silo
EP36	EU36	Clinker Withdrawal Conveyor Transfer
EP37	EU37	Clinker Belt 206 to 208 Transfer
EP39	EU39	Clinker Transfer
EP39-1	EU38	Clinker Belt 208 to Belt 211 Transfer
	EU39-1	Clinker Ladder
EP39-3	EU39-3	Clinker Bucket Transfer
EP41	EU41	No. 3 Finish Mill
	EU41A	Vibrating Conveyor Transfer
	EU41B	Air Separator

D. Conveying System Transfer Points\Raw and Finish Mills\Storage Bins\Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL (cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP42	EU41	No. 3 Finish Mill
	EU41A	Vibrating Conveyor Transfer
	EU41B	Air Separator
EP43	EU43	No. 5 Finish Mill
	EU43A	Vibrating Conveyor Transfer
	EU43B	Air Separator
EP44	EU44	No. 6 Finish Mill
	EU44A	Vibrating Conveyor Transfer
	EU44B	Air Separator
EP45	EU45	No. 4 Finish Mill
	EU45A	Vibrating Conveyor Transfer
	EU5B	Air Separator
EP46	EU46	Clinker Transfer
	EU46A	Clinker Transfer
EP47	EU47	Storage Silo
EP48	EU48	Transfer Bucket Elevator
EP49	EU49	Direct Cement Loadout (Emergency Only)
EP50	EU50	Silo Row 40 Cement Bulk Loadout
EP51	EU51	Silo Row 30 Cement Loadout
EP52	EU52	Silo Row 50 Rail/Truck Cement Loading System
EP53	EU53	Silo Row 50 Cement Loadout Spout

E. Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP2	EU2	Primary Crusher
	EU2A	Raw Material Transfer
EP3	EU3	Screening
	EU3A	Raw Material TP-Belt 2 to Screen
	EU3B	Raw Material TP- Screen to Belt 3
	EU3C	Raw Material TP- Screen to Belt 4

E. Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 (cont.)

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP5	EU5	Secondary Crusher
	EU5A	Raw Material Transfer-Stone 5 to 6
	EU5B	Raw Material Transfer
EP6	EU6	Raw Material Transfer
	EU6A	Raw Material Transfer

F. Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP8	EU8	Raw Material Transfer-Belt D-49 to D-01
EP9	EU9	Raw Material Transfer-Belt D-01 to D-02
EP10	EU10	Raw Material Transfer-Belt D-02 to Stone Bin
EP12	EU12	Raw Material Transfer-Reclaim Belt 2 to Crusher/Stone Belt 2
EP13	EU13	Raw Material Transfer-Crusher/Stone Belt 2 to Crusher Belt 2
EP15	EU15	Clay Crushing

G. Miscellaneous Sources

Emission Point Number	Associated Emission Unit Number	Associated Emission Unit Description
EP25	EU25	Kiln/Calciner/Preheater
EP27		
EP26	EU26	Clinker Cooler
EP28	EU28	Kiln Dust Disposal Tank
	EU29	Kiln Dust Loadout
EP55	EU55	Limestone Drilling
EP55A	EU55A	Quarry Blasting
EP62	EU62	Coal Mill
EP92	EU92	Secondary Fuel Receiving

Insignificant Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
IN-A1	Plant Used Oil Tank < 1,000 gal.
IN-A2	Quarry Used Oil Tank < 1,000 gal.
IN-A3	Kerosene Tank < 1,000 gal.
IN-A4	Underground Diesel Tank < 1,000 gal.
IN-A5	Underground Gasoline Tank < 1,000 gal.
65	East HCl Tank 5,400 gal.
66	Center HCl Tank 5,400 gal.
67	West HCl Tank 5,400 gal.
68	Grinding Aid Concentrate Tank 12,000 gal.
69A	Grinding Aid Tank (with water) 1,872 gal.
69B	Grinding Aid Tank (with water) 1,872 gal.
70A	Airlon Concentrate Tank 6,000 gal.
70B	Airlon Holding Tank (with water) 1,512 gal
71	Mixing Tank
72	Grinding Aid No. 2 Concentrate 8,000 gal.

II. Plant-Wide Conditions

Facility Name: Lehigh Cement Company
Permit Number: 04-TV-011

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

Permit Duration

The term of this permit is: Five (5) years
Commencing on: July 29, 2004
Ending on: July 28, 2009

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits
Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO_2): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter (state enforceable only)[1]:
No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.
For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a" (as revised 7/21/1999)

[1] Pending approval into Iowa's State Implementation Plan (SIP), paragraph 567 IAC 23.3(2)"a" (as revised 7/21/1999) is considered *state enforceable only*.

Particulate Matter[2]:
The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 567 — 21.2(455B), 23.1(455B), 23.4(455B) and 567 — Chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.

Authority for Requirement: 567 IAC 23.3(2)"a" (prior to 7/21/1999)

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

Compliance Plan

The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.

Unless otherwise noted in Section III of this permit, Lehigh Cement Company. is in compliance

[2] Paragraph 567 IAC 23.3(2)"a" (prior to 7/21/1999) is the general particulate matter emission standard currently in the Iowa SIP..

with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, Lehigh Cement Company shall comply with such requirements in a timely manner.
Authority for Requirement: 567 IAC 22.108(15)

Operational Limits & Requirements
The owner/operator of this facility shall comply with the operational limits and requirements listed below.

Terms and Conditions: The Permittee shall comply with all applicable requirements of *Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32*. The Permittee shall also comply with all applicable requirements of 40 CFR 63 Subpart LLL-*National Emission Standards for Hazardous Air Pollutants for Source Categories; Portland Cement Manufacturing Industry*, and the applicable requirements of 40 CFR 63 Subpart A *General Provisions* as listed in Table 1 of 40 CFR 63 Subpart LLL. Per 40 CFR 63.1356 any affected source subject to the provisions of 40 CFR 63 Subpart LLL will be exempt from any otherwise applicable new source performance standard contained in 40 CFR 60 Subpart F or Subpart OOO, and the requirements of 40 CFR 60 Subpart Y do not apply to conveying system transfer points used to convey coal from the mill to the kiln that are associated with coal preparation.

Applicable Limits and Requirements From Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32

See Appendix A.

Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry.

See Appendix C.

Authority for Requirement: Iowa Department of Natural Resources Administrative Consent Order 1999-AQ-3
40 CFR 63 Subpart LLL
567 IAC 23.1(4)"bl"

III. Emission Point-Specific Conditions

Facility Name: Lehigh Cement Company
Permit Number: **04-TV-011**

Emission Point ID Number: See Table: Material Transfer Fugitive Emission Sources Subject Only to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Material Transfer Fugitive Emission Sources Subject Only to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule

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Table: Material Transfer Fugitive Emission Sources Subject Only to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity/Size
EP1	EU1	Railcar Unloading	Coal, Gypsum, Anhydrite	300 TPH
EP7	EU7A	Limestone Transfer	Limestone	750 TPH
EP14	EU14A	Clay Delivery and Distribution	Clay	500 TPH
	EU14B	Clay Transfer to Process		500 TPH
EP15A	EU15A	Raw Material Transfer – Clay Crushing System	Clay & Crushed Limestone	500 TPH
EP15B	EU15B	Raw Material Transfer - Clay Crushing System	Clay & Crushed Limestone	500 TPH
EP39-2	EU39-2	Gypsum/Anhydrite Bucket Transfer	Gypsum/Anhydrite	150 TPH
EP40	EU40	Coal Crusher	Coal	55 TPH
EP56A	EU56A	Truck Loading - Limestone	Limestone	1,000 TPH
EP57A	EU57A	Truck Loading - Clay	Clay	500 TPH
EP58A	EU58A	Coal Transfer	Coal	7,200 TPD
EP59A	EU59A	Sand Delivery & Unloading	Sand	500 TPH
	EU59B	Sand Transfer to Process		500 TPH

Table: Material Transfer Fugitive Emission Sources Subject Only to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule (cont.)

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity/Size
EP60A	EU60A	Clay Delivery & Unloading	Clay	500 TPH
	EU60B	Clay Transfer to Process		500 TPH
EP61A	EU61A	Clay Delivery & Unloading	Clay	500 TPH
	EU61B	Clay Transfer to Process		500 TPH
EP62-1	EU62-1	Coal Transfer	Coal	55 TPH
EP63A	EU63A	Kiln Dust Unloading	Kiln Dust	300 TPD
EP73A	EU73A	Limestone Transfer to Process Pile at Crusher	Limestone	19,200 TPD
EP74A	EU74A	Limestone Transfer-Process Pile at Crusher	Limestone	2,000 TPD
EP75A	EU75A	Clinker Transfer to Craneway	Clinker	1,200 TPD
EP76A	EU76A	Clinker, Gypsum, Slag Transfer	Clinker, Gypsum, Slag	3,600 TPD

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Table: Material Transfer Fugitive Emission Sources Subject Only to Administrative Consent Order 1999-AQ-32 and the Fugitive Dust Rule-Operational Limits & Requirements

Emission Point Number	Associated Emission Unit Number	Process Throughput Limit			Reporting & Recordkeeping[1]	Authority for Requirements
		Max. No. of Transfers	Maximum Daily Throughput -Each Transfer (tons/day)	Maximum Calendar Year Throughput-Each Transfer (tons/year)		
EP1	EU1	3	7,200	200,000	The total daily throughput and throughput rates for each source shall be entered into a daily log, and annual throughputs totaled annually to demonstrate compliance with the daily and annual throughput limits.	Section V(3) Iowa Department of Natural Resources Administrative Consent Order No. 199-AQ-32
EP7	EU7A	1	19,200[2]	2,500,000		
EP14	EU14A	2	12,000	200,000		
	EU14B	1	12,000	200,000		
EP15A	EU15A	4	12,000	200,000		
EP15B	EU15B					
EP39-2	EU39-2	2	3,600	100,000		
EP40	EU40	1	1,320	200,000		
EP56A	EU56A	2	16,000[3]	1,675,800		
EP57A	EU57A	2	12,000[4]	141,667		
EP58A	EU58A	1	7,200	200,000		
EP59A	EU59A	2	12,000	2,190,000		
	EU59B	1	12,000	2,190,000		
EP60A	EU60A	2	12,000	2,190,000		
	EU60B	1	12,000	2,190,000		
EP61A	EU61A	2	12,000	2,190,000		
	EU61B	1	12,000	2,190,000		
EP62-1	EU62-1	4	1,320	481,800		
EP63A	EU63A	1	300	70,080		
EP73A	EU73A	1	19,200[2]	500,000		
EP74A	EU74A	1	2,000[5]	70,000		
EP75A	EU75A	1	1,200[6]	15,000		
EP76A	EU76A	1	3,600	50,000		

[1]The records shall be kept on site for a minimum of five years, and shall be available for inspection by the Department.

[2]Maximum hourly throughput will be 1,200 ton/hour for the period 7:00 a.m. through 11:00 p.m. and 750 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

(3)Maximum hourly throughput will be 1,000 ton/hour for the period 7:00 a.m. through 11:00 p.m. and 666 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.
(4)Maximum hourly throughput will be 1,000 ton/hour for the period 8:00 a.m. through 8:00 p.m. and 460 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.
(5)Maximum hourly throughput will be 250 ton/hour for the period 8:00 a.m. through 4:00 p.m. and 83.3 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.
(6)Maximum hourly throughput will be 100 ton/hour for the period 7:00 a.m. through 7:00 p.m. and 50 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day. If the sources footnoted above operate within the maximum hourly throughput time periods indicated, then the sources daily logs and annual throughput totals shall be used to demonstrate compliance. If these sources operate at other times during any day, then compliance will be demonstrated for that calendar day by entering the hourly throughput and total daily throughput rates for each of these sources in daily logs to demonstrate compliance with the daily and annual throughput limits.

Authority for Requirement: Section V(3) Iowa Department of Natural Resources Administrative Consent Order No. 199-AQ-32

The coal crusher (emission point 40) shall be operated only in an enclosed structure with all access doors and any other openings closed during normal operations except for doors during ingress and egress.

Authority for Requirement: Section V(4) Iowa Department of Natural Resources Administrative Consent Order No. 199-AQ-32

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Numbers: See Table: Storage Piles

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Storage Piles

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Table: Storage Piles

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Size
EP14	EU14	Clay Storage Pile No. 1	Clay	1 acre
EP58	EU58	Coal Storage Pile	Coal	3 acres
EP59	EU59	Sand Storage pile	Sand	4 acres
EP60	EU60	Clay Storage Pile No.2	Clay	1 acre
EP61	EU61	Clay Storage Pile No. 3	Clay	1 acre
EP63	EU63	Kiln Dust Storage Pile	Kiln Dust	2 acres
EP73	EU73	Quarry Run Limestone Storage Pile	Limestone	1 acre
EP74	EU74	Quarry Run Limestone Storage Pile	Limestone	0.5 acre
EP75	EU75	Clinker Storage Pile	Clinker	0.5 acre
EP76	EU76	Raw Materials Storage Pile	Clinker, Gypsum, Granulated Blast Furnace Slag	0.75 acre

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

1. Unless otherwise allowed for below, the only storage piles allowed within the Lehigh facility shall be the storage piles listed in the table: Storage Piles above and the storage piles shall not exceed the sizes listed under "Size" in same table.
2. Lehigh may relocate a pile specified in the table: Storage Piles above only after providing written notice to DNR and submitting the results of computer dispersion modeling showing that no exceedances of the PM_{10} NAAQS would result. If an exceedance of the PM_{10} NAAQS would result based on the computer modeling results, Lehigh shall not move the pile as proposed and the pile shall remain at the location designated in *Exhibit D, Appendix A***.**
3. Notwithstanding the requirements of 1. and 2. above, Lehigh may operate temporary piles of materials (not identified in the table: Storage Piles above) that result from maintenance or other similar activities. No such temporary pile shall be maintained for more than one 72-hour period.
4. Notwithstanding the requirements of 1, 2 and 3 above Lehigh may maintain temporary piles of overflow raw materials and product (not identified in the table: Storage Piles above) that may result from unforseen and unplanned operating conditions or problems. Lehigh shall take all reasonable measures to limit the size of any such pile and the fugitive emissions that result therefrom. No more than two such temporary piles may exist at one time. No such temporary pile shall be maintained for more than one (1) month. Lehigh shall maintain records that include the pile location, planned or actual pile size, pile material content, and the planned removal date for each pile. The records shall be retained for a period of five years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate.

Authority for Requirement: Section V Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Numbers: See Table: Haulroads

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Haulroads

Table: Haulroads

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Raw Material	Rated Capacity
EP56	EU56	Limestone Quarry Haulroad	Unpaved Road	70 trips/day
EP57	EU57	Clay Quarry Haulroad	Unpaved Road	1,667 VMT/yr.
EP63B	EU63B	Kiln Dust Haulroad	Paved Road	10 trips/day
EP80	EU80	Cement Haulroad-Cement Loadout to U.S. 65	Paved Road	222 trips/day

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

1. Lehigh must have speed controls designed to ensure that the average speed of the haul trucks on the limestone and clay haul roads (emission points EP56 and EP57) does not exceed 18.5 miles per hour. The speed controls shall consist of a combination of speed limit signs, stop signs, and governors on the accelerators of each haul road truck, or other methods approved in writing by DNR.

2. The maximum number of round trips per day and per calendar year on the limestone haul

road (EP56) for all of the haul trucks, combined, shall be limited to 70 and 17,640 trips, respectively. The number of trips per day on the limestone haul road shall be entered in a daily log to demonstrate compliance with this requirement. Daily logs shall be retained for a period of five years following the date of such entries and shall be made available to the DNR upon request.

3. Fugitive emissions from the limestone haul road (EP56) shall be controlled by applying a chemical dust suppressant. A control efficiency of 90 percent shall be maintained on the first 1.41 miles of the limestone haul road from the quarry. This will require a ground inventory of 0.25 gallons of chemical dust suppressant per square yard. This section of limestone haul road is 30 feet wide and 1.41 miles long, giving it a total area of 24,816 square yards. At least 6,204 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 1,241 gallons of the selected chemical dust suppressant shall be applied every calendar month with no more than 35 days between applications, to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts other than those specified above be applied, Lehigh shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.
   A control efficiency of 95 percent shall be maintained on the remaining length of the limestone haul road from 1.41 miles from the quarry to the primary limestone crusher (emission point EP2). This will require a ground inventory of 0.25 gallons of chemical dust suppressant per square yard. The remaining limestone haul road is 30 feet wide and 2.89 miles long, giving it a total area of 50,864 square yards. At least 12,716 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 2,543 gallons of the selected chemical dust suppressant shall be applied not less than once every other week to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard.
   If the selected chemical dust suppressant can not be applied because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated. Records of the applications shall be maintained and shall include the dates of each application, the chemical used, the application intensity (gals./sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. If the selected chemical dust suppressant is not applied as planned, then the records should so indicate and provide an explanation. The records shall be retained for a period of five years following the date of the above entries and shall be made available to the DNR upon request.

4. The maximum number of round trips per day and per calendar year on the clay haul road (EP57) for all of the haul trucks, combined, shall be limited to 130 and 1,667 trips, respectively. The number of trips per day on the clay haul road shall be entered in a daily log to demonstrate compliance with this requirement. Daily logs shall be retained for a period of

five years following the date of such entries and shall be made available to the DNR upon request.

5. Fugitive emissions from the clay haul road (EP57) shall be controlled to an effective control efficiency of 95 percent by applying a chemical dust suppressant. A control efficiency of 95 percent will require a ground inventory of 0.25 gallons the selected chemical dust suppressant per square yard. The clay haul road is 30 feet wide and 0.9 miles long, giving it a total area of 15,840 square yards. At least 3,960 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 792 gallons of the selected chemical dust suppressant shall be applied not less than once every other week to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts other than those specified above be applied, Lehigh shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.
   If the selected chemical dust suppressant can not be applied because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated. Records of the applications shall be maintained and shall include the dates of each application, the chemical used, the application intensity (gals./sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. If the selected chemical dust suppressant is not applied as planned, then the records should so indicate and provide an explanation. The records shall be retained for a period of five years following the date of the above entries and shall be made available to the DNR upon request.
   It is not uncommon for this clay haul road to go unused for periods greater than one-half month. In the event Lehigh does not use the clay haul road for a period greater than one-half month, Lehigh shall not be required to apply the chemical dust suppressant as provided in the above paragraph, on the condition that such event is noted and explained in the records required herein and that, prior to use, an application will be made, weather permitting and requiring.

6. The maximum number of round trips per day and per calendar year on the paved haul road from the product loadout silos to U.S. Highway 65 (emission point EP80) for all haul trucks combined shall be limited to the values listed below.

Month	Maximum Number of Trips per Day
January	80
February	69
March	200
April	250
May	250
June	250
July	203

Month	Maximum Number of Trips per Day
August	250
September	250
October	250
November	250
December	250
Calendar Year	**Maximum Number of Trips Per Year**
January through December	37,302

The number of round trips per day on this haul road shall be entered in a monthly log to demonstrate compliance with this requirement. Monthly logs shall be retained for a period of five years following the date of such entries and shall be made available to the DNR upon request.

7. Fugitive emissions from the paved haul road from the product loadout silos to U.S. Highway 65 shall be controlled to an effective control efficiency of 80 percent by water flushing followed by sweeping. Using an application rate of 0.48 gallons per square yard, this haul road shall require a water flushing followed by sweeping application after every 362 vehicle passes to maintain an 80 percent control efficiency. Based on a worse-case round trip estimate of 222 trips per day, the water flushing followed by sweeping will have to be accomplished every two days. The haul road is 24 feet wide and 2072 feet long, giving a total area of 5,525 square yards. Based on an application rate of 0.48 gallons of water per square yard, 2,652 gallons of water will be required for each application.
   If water flushing followed by sweeping cannot be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the water, could create hazardous driving conditions, then the water flushing and sweeping shall be postponed and accomplished as soon after the scheduled date as the conditions preventing the application have abated. Additionally, water flushing and sweeping need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hour time period. Records of the applications shall be maintained and shall include the dates and times of each application, the calculated application intensity, the areas treated, the operator's initials, and documentation road and weather conditions, if necessary. If the water flushing is not acocmplished because ambient air temperatures are less than 35^0 F during the entire day, or precipitation exceeding 0.2 inches has occurred in the preceding 24 hours, then the records shall indicate this. The records shall be retained for a period of five years following the date of the above entries and shall be made available to the DNR upon request.

Authority for Requirement: Section V(6 through 12) Iowa Department of Natural Resources
Administrative Consent Order No. 1999-AQ-32

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Numbers: See Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL

Associated Equipment

See Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL, below

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Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (Tons/hr)
EP11	EU11	Raw Material Transfer-Apron Feeder to Collection Belt	CE11	Baghouse	Crushed Limestone	440
EP18	EU18	Grinding Circuit-Raw Material Transfer	CE-18	Baghouse	Raw Clay	800
EP19	EU19	Raw Material Transfer to Homoginizing Silo	CE-19	Baghouse	Raw Mix	200
EP20	EU20	Raw Material Transfer-IBAU Bin Bottom Elevator	CE-20	Baghouse	Raw Mix	550
EP21	EU21	Raw Material Transfer-IBAU Elevator W to top Silo Conveyor	CE-21	Baghouse	Raw Mix	550
EP22	EU22	Raw Material Transfer-IBAU Elevator S to top Silo Conveyor	CE-22	Baghouse	Raw Mix	550
EP23	EU23	IBAU Bin S Top Elevator Raw Material Transfer	CE-23	Baghouse	Raw Mix	550
EP24	EU24	Raw Material Transfer	CE-24	Baghouse	Raw Mix	225
EP33	EU33	Outhaul Conveyor Transfer	CE33	Baghouse	Clinker	180
EP34	EU34	Clinker Truck Loadout	CE34	Baghouse	Clinker	100
EP35	EU35	Outhaul Conveyor Transfer to Clinker Silo	CE35	Baghouse	Clinker	300
EP36	EU36	Clinker Withdrawal Conveyor Transfer	CE36	Baghouse	Clinker	180
EP37	EU37	Clinker Belt 206 to 208 Transfer	CE37	Baghouse	Clinker	300
EP39	EU39	Clinker Transfer	CE39	Baghouse	Clinker	114.58

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL (Cont.)

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (Tons/hr)
EP39-1	EU38	Clinker Belt 208 to Belt 211 Transfer	CE38	Baghouse	Clinker	300
	EU39-1	Clinker Ladder				150
EP39-3	EU39-3	Clinker Bucket Transfer	None	None	Clinker	150
EP41	EU41	No. 3 Finish Mill	CE-41	Baghouse	Clinker	30
	EU41A	Vibrating Conveyor Transfer				
	EU41B	Air Separator				
EP42	EU41	No. 3 Finish Mill	CE-41	Baghouse	Clinker	30
	EU41A	Vibrating Conveyor Transfer				
	EU41B	Air Separator				
EP43	EU43	No. 5 Finish Mill	CE-43	Baghouse	Clinker	30
	EU43A	Vibrating Conveyor Transfer				
	EU43B	Air Separator				
EP44	EU44	No. 6 Finish Mill	CE-44	Baghouse	Clinker	30
	EU44A	Vibrating Conveyor Transfer				
	EU44B	Air Separator				
EP45	EU45	No. 4 Finish Mill	CE-45	Baghouse	Clinker	75
	EU45A	Vibrating Conveyor Transfer				
	EU5B	Air Separator				
EP46	EU46	Clinker Transfer	CE-46	Baghouse	Clinker	75
	EU46A	Clinker Transfer				
EP47	EU47	Storage Silo	CE47	Baghouse	Cement	100
EP48	EU48	Transfer Bucket Elevator	CE48	Baghouse	Cement	350
EP49	EU49	Direct Cement Loadout (Emergency Only)	None	None	Cement	300

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL (Cont.)

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (Tons/hr)
EP50	EU50	Silo Row 40 Cement Bulk Loadout	CE50	Baghouse	Cement	350
EP51	EU51	Silo Row 30 Cement Loadout	CE51	Baghouse	Cement	350
EP52	EU52	Silo Row 50 Rail/Truck Cement Loading System	CE52	Baghouse	Cement	400
EP53	EU53	Silo Row 50 Cement Loadout Spout	CE53	Baghouse	Cement	400 TPH

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified in Table: *Conveying System Transfer Points\Raw and Finish Mills\Storage Bins\Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits.*

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Limits

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)	PM Limit (gr/scf)	Construction Permit No.
EP11	EU11	10%	0.86	0.1	82-A-022-S3
EP18	EU18	10%	1.41	0.1	82-A-028-S1
EP19	EU19	10%	1.37	0.1	77-A-223-S2
EP20	EU20	10%	0.29	0.1	82-A-032-S2
EP21	EU21	10%	0.29	0.1	82-A-029-S2
EP22	EU22	10%	0.92	0.1	82-A-031-S2
EP23	EU23	10%	0.88	0.1	82-A-030-S2
EP24	EU24	10%	1.34	0.1	82-A-033-S2
EP33	EU33	10%	0.51	0.1	80-A-175-S2
EP34	EU334	10%	0.17	0.1	80-A-177-S2
EP35	EU35	10%	1.37	0.1	80-A-179-S2
EP36	EU36	10%	0.69	0.1	80-A-178-S2
EP37	EU37	10%	0.17	0.1	80-A-174-S2
EP39	EU39	10%	1.08	0.1	86-A-021-S2
EP39-1	EU38	10%	0.86	0.1	99-A-225-S3
	EU39-1				
EP39-3	EU39-3	10%	N/A	0.1	None
EP41	EU41	10%	1.16	0.1	00-A-397-S1
	EU41A				
	EU41B				
EP42	EU41	10%	1.16	0.1	00-A-397-S1
	EU41A				
	EU41B				

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits (cont.)

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)	PM Limit (gr/scf)	Construction Permit No.
EP43	EU43	10%	1.46	0.1	00-A-398-S1
	EU43A				
	EU43B				
EP44	EU44	10%	1.46	0.1	00-A-400-S1
	EU44A				
	EU44B				
EP45	EU45	10%	5.14	0.1	82-A-038-S2
	EU45A				
	EU45B				
EP46	EU46	10%	0.77	0.1	82-A-037-S2
	EU46A				
EP47	EU47	10%	1.29	0.1	78-A-322-S2
EP48	EU48	10%	0.51	0.1	83-A-008-S2
EP49	EU49	10%	N/A	N/A	None
EP50	EU50	10%	0.17	0.1	83-A-009-S2
EP51	EU51	10%	0.17	0.1	83-A-010-S2
EP52	EU52	10%	1.08	0.1	90-A-365-S2
EP53	EU53	10%	1.08	0.1	90-A-366-S2

Pollutant: Opacity
Emission Limit: 10 %[(1)]
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63.1348

[(1)] If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit: 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit: As specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Operational Limits & Requirements

Emission Point Number	Associated Emission Unit Number	Hours of Operation Limit	Reporting & Recordkeeping	Authority for Requirements
EP11	EU11	Each emission source shall not operate more than 7,884 hours per rolling twelve-month period.	1. For the first twelve months of operation, determine the cumulative hours of operation of each source for each month of operation. 2. After the first twelve months of operation determine the annual hours of operation of each emission source on a rolling twelve-month total for each month of operation.	Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits Section V(2) Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32
EP18	EU18			
EP19	EU19			
EP20	EU20			
EP21	EU21			
EP22	EU22			
EP23	EU23			
EP41	EU41	Each emission source shall not operate more than 7,534 hours per rolling twelve-month period		
	EU41A			
	EU41B			
EP42	EU41			
	EU41A			
	EU41B			
EP43	EU43			
	EU43A			
	EU43B			
EP44	EU44			
	EU44A			
	EU44B			
EP45	EU45			
	EU45A			
	EU45B			
EP46	EU46			
	EU46A			
EP39	EU39	This emission source shall not operate more than 5,843 hours per rolling twelve-month period.		Iowa DNR Construction Permit 86-A-021-S2

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Operational Limits & Requirements (cont.)

Emission Point Number	Associated Emission Unit Number	Process Throughput Limit			Reporting & Recordkeeping	Authority for Requirements
		Max. No. of Transfers	Maximum Daily Throughput -Each Transfer (tons/day)	Maximum Calendar Year Throughput- Each Transfer (tons/year)		
EP39-3	EU39-3	2	3,600	500,000	The total daily throughput and throughput rates for each source shall be entered into a daily log, and annual throughputs totaled annually to demonstrate compliance with the daily and annual throughput limits.	Section V(3) Iowa Department of Natural Resources Administrative Consent Order No. 199-AQ-32
EP49	EU49	1	300	5,000		

Additional Reporting & Record keeping:
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

Recordkeeping for NESHAP 40 CFR 63 Subpart LLL at the facility shall be done per 40 CFR 63.1355

Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63.1355

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table: Conveying System Transfer Points\Raw and Finish Mills\Storage Bins\Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL-Emission Point Characteristics

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

			Stack Characteristics				
Emission Point Number	**Emission Unit Number**	**Construction Permit Number**	**Height (ft.)**	**Diameter (inches)**	**Exhaust Flowrate (scfm)**	**Exhaust Temp. (^{o}F)**	**Discharge Style**
EP11	EU11	82-A-022-S3	80	39 X 16	5,000	70	Horizontal
EP18	EU18	82-A-028-S1	110	24	6,600	200	Horizontal
EP19	EU19	77-A-223-S2	190	24	14,600	120	Horizontal
EP20	EU20	82-A-032-S2	110	26 X 18	1,400	200	Horizontal
EP21	EU21	82-A-029-S2	100	16	1,400	200	Horizontal
EP22	EU22	82-A-031-S2	110	16	4,300	200	Horizontal
EP23	EU23	82-A-030-S2	110	16	4,100	200	Horizontal
EP24	EU24	82-A-033-S2	190	24	6,300	200	Horizontal
EP33	EU33	80-A-175-S2	100	8 X 6	3,000	70	Horizontal
EP34	EU34	80-A-177-S2	100	12 X 12	1,000	70	Horizontal
EP35	EU35	80-A-179-S2	180	18 X 24	8,000	70	Horizontal
EP36	EU36	80-A-178-S2	30	18 X 12	4,000	70	Horizontal
EP37	EU37	80-A-174-S2	30	6 X 6	1,000	70	Horizontal
EP39	EU39	86-A-021-S2	80	20	12,000	70	Unobstructed Vertical
EP39-1	EU38 EU39-1	99-A-225-S3	55	17.9 X 20	8,000 - 10,000	70 - 200	Horizontal
EP41	EU41 EU41A EU41B	00-A-396	80	16 X 16	13,500	170	Horizontal
EP42	EU41 EU41A EU41B	00-A-397-S1	80	16 X 16	13,500	170	Horizontal
EP43	EU43 EU43A EU43B	00-A398-S1	80	18 X 18	14,300	170	Horizontal
EP44	EU44 EU44A EU44B	00-A-400-S1	80	16 X 16	14,300	170	Unobstructed Vertical
EP45	EU45 EU45A EU45B	82-A-038-S2	95	48	60,000	200	Unobstructed Vertical

Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics (cont.)

			Stack Characteristics				
Emission Point Number	**Emission Unit Number**	**Construction Permit #**	**Height (ft.)**	**Diameter (inches)**	**Exhaust Flowrate (scfm)**	**Exhaust Temp. (^{o}F)**	**Discharge Style**
EP46	EU46 EU46A	82-A-037-S2	85	28	9,000	100	Horizontal
EP47	EU47	78-A-322-S2	150	24 X 24	15,000	70	Horizontal
EP48	EU48	83-A-008-S2	150	12 X 10	3,000	70	Horizontal
EP50	EU50	83-A-009-S2	150	4 X 12	1,000	70	Horizontal
EP51	EU51	83-A-010-S2	150	4 X 12	150	70	Horizontal
EP52	EU52	90-A-365-S2	150	20 X 17	6,300	70	Horizontal
EP53	EU53	90-A-366-S2	158	8	6,300	70	Horizontal

Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements

The facility shall check the opacity as described in 40 CFR 63.1350 ((a)(4)(i-vii) and (e) of **Appendix C-Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-Monitoring Requirements**.

Authority for Requirement: Iowa DNR Construction Permits specified in Table: Conveying System Transfer Points\ Raw and Finish Mills\ Storage Bins\ Bulk Loading and Unloading Units Subject to 40 CFR 63 Subpart LLL -Emission Point Characteristics

567 IAC 23.1(4)"bl"

40 CFR 63.1350

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

For controlled sources only

Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity-**see Appendix B.**

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 23.1(4)"bl"
40 CFR 63.1350(a)

Emission Point ID Number: See Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32

Associated Equipment

See Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32

Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (Tons/hr)
EP2	EU2	Primary Crusher	CE2	Baghouse	Limestone and Other Calcareous Materials	750
	EU2A	Raw Material Transfer				
EP3	EU3	Screening	CE3	Baghouse	Limestone and Other Calcareous Materials	750
	EU3A	Raw Material Transfer-Belt 2 to Screen				750
	EU3B	Raw Material Transfer-Screen to Belt 3				487
	EU3C	Raw Material Transfer-Screen to Belt 4				450
EP5	EU5	Secondary Crusher	CE5	Baghouse	Crushed Limestone and Other Calcareous Materials	450
	EU5A	Raw Material Transfer-Stone 5 to 6				450
	EU5B	Raw Material Transfer				450
EP6	EU6	Raw Material Transfer	CE6	Baghouse	Crushed Limestone and Other Calcareous Materials	487
	EU6A	Raw Material Transfer				750

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.

The emissions from these emission points shall not exceed the levels specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 -Emission Limits

Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 -Emission Limits

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)	PM Limit (gr/scf)	Construction Permit No.
EP2	EU2	40%	2.4	0.1	77-A-260-S2
	EU2A				
EP3	EU3	40%	1.03	0.1	77-A-313-S2
	EU3A				
	EU3B				
	EU3C				
EP5	EU5	40%	0.81	0.1	00-A-395-S1
	EU5A				
	EU5B				
EP6	EU6	40%	0.51	0.1	77-A-360-S2
	EU6A				

Pollutant: Opacity
Emission Limit: 40 %[(1)]
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32-Emission Limits
567 IAC 23.3(2)"d"

[(1)] If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit: 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32-Emission Limits
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit: As specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32-Emission Limits
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32-Operational Limits and Requirements

Emission Point Number	Associated Emission Unit Number	Hours of Operation Limit	Reporting & Recordkeeping	Authority for Requirements
EP2	EU2	Each emission source shall not operate more than 4,380 hours per rolling twelve (12) month period.	After the first twelve (12) months of operation, determine the annual hours of operation for each source on a rolling twelve (12) month total for each month of operation.	Administrative Consent Order No. 1999-AQ-32 Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to ACO-Emission Limits
	EU2A			
EP3	EU3			
	EU3A			
	EU3B			
	EU3C			
EP5	EU5			
	EU5A			
	EU5B			
EP6	EU6			
	EU6A			

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR.

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32-Emission Point Characteristics

Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32-Emission Point Characteristics

			Stack Characteristics				
Emission Point Number	**Emission Unit Number**	**Construction Permit Number**	**Height (ft.)**	**Diameter (inches)**	**Exhaust Flowrate (scfm)**	**Exhaust Temp. (^{o}F)**	**Discharge Style**
EP2	EU2	77-A-260-S2	60	36 X 42	28,000	70	Horizontal
	EU2A						
EP3	EU3	77-A-313-S2	55	24 X 30	12,000	70	Horizontal
	EU3A						
	EU3B						
	EU3C						
EP5	EU5	00-A-395-S1	55	18	9,500	70	Horizontal
	EU5A						
	EU5B						
EP6	EU6	77-A-360-S2	55	12 X 24	3,800	70	Horizontal
	EU6A						

Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32-Emission Point Characteristics

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

For Each Baghouse

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: See Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR Subpart F

Associated Equipment

See Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F

Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Raw Material	Rated Capacity (Tons/hr)
EP8	EU8	Raw Material Transfer-Belt D-49 to D-01	CE8	Baghouse	Crushed Limestone	585
EP9	EU9	Raw Material Transfer-Belt D-01 to D-02	CE9	Baghouse	Crushed Limestone	585
EP10	EU10	Raw Material Transfer-Belt D-02 to Stone Bin	CE10	Baghouse	Crushed Limestone	585
EP12	EU12	Raw Material Transfer-Reclaim Belt 2 to Crusher/Stone Belt 2	CE12	Baghouse	Crushed Limestone	220
EP13	EU13	Raw Material Transfer-Crusher/Stone Belt 2 to Crusher Belt 2	CE13	Baghouse	Crushed Limestone	220
EP15	EU15	Clay Crushing	CE15	Baghouse	Clay and Crushed Limestone	500

Applicable Requirements

Emission Limits (lb/hr, gr/dscf, lb/MMBtu, % opacity, etc.

The emissions from these emission points shall not exceed the levels specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F -Emission Limits

Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F -Emission Limits

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)	PM Limit (gr/scf)	Construction Permit No.
EP8	EU8	10%	0.36	0.1	82-A-027-S3
EP9	EU9	10%	0.54	0.1	82-A-020-S3
EP10	EU10	10%	0.54	0.1	82-A-021-S3
EP12	EU12	10%	0.36	0.1	82-A-024-S3
EP13	EU13	10%	0.36	0.1	82-A-023-S3
EP15	EU15	10%	0.79	0.1	82-A-019-S3

Pollutant: Opacity
Emission Limit: 10 %[(1)]
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Emission Limits

567 IAC 23.1(2)"c"
40 CFR 60.6 (2)(c)

[(1)] If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit: 0.1 gr/scf
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Emission Limits

567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limit: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Emission Limits
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Emission Limits

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Operational Limits and Requirements

Emission Point Number	Associated Emission Unit Number	Hours of Operation Limit	Reporting & Recordkeeping	Authority for Requirements
EP8	EU8	Each emission source shall not operate more than 7,884 hours per rolling twelve-month period.	1. For the first twelve months of operation, determine the cumulative hours of operation of each source for each month of operation. 2. After the first twelve months of operation determine the annual hours of operation of each emission source on a rolling twelve-month total for each month of operation.	Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Emission Limits Section V(2) Iowa Department of Natural Resources Administrative Consent Order No. 1999-AQ-32
EP9	EU9			
EP10	EU10			
EP12	EU12	Each emission source shall not operate more than 876 hours per rolling twelve-month period.		
EP13	EU13			
EP15	EU15			

Additional Reporting & Record keeping:
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. The owner or operator shall maintain a record of all inspections of the control equipment. The owner or operator shall document the results of the inspections and note any repairs that were the result of the inspections.

Control equipment parameters:

1. All control equipment shall be maintained according to the manufacturer's specifications.

Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Emission Limits

Emission Point Characteristics

These emission points shall conform to the conditions specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Emission Point Characteristics

Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F-Emission Point Characteristics

			Stack Characteristics				
Emission Point Number	**Emission Unit Number**	**Construction Permit Number**	**Height (ft.)**	**Diameter (inches)**	**Exhaust Flowrate (scfm)**	**Exhaust Temp. (^{o}F)**	**Discharge Style**
EP8	EU8	82-A-027-S2	40	10 X 12	2,100	70	Horizontal
EP9	EU9	82-A-020-S3	80	11 X 20	3,100	70	Horizontal
EP10	EU10	82-A-021-S3	80	16	3,200	70	Horizontal
EP12	EU12	82-A-024-S3	80	16	2,100	70	Horizontal
EP13	EU13	82-A-023-S3	40	9 X 16	2,100	70	Horizontal
EP15	EU15 EU15A EU15B	82-A-019-S2	47	30	9,300	70	Obstructed Vertical

Authority for Requirement: Iowa DNR Construction Permits specified in Table: Non-Fugitive Sources Subject to Administrative Consent Order 1999-AQ-32 and 40 CFR 60 Subpart F - Emission Point Characteristics

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flowrate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity (>10 %) is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake opacity readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐
For Each Baghouse

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: See Table: Kiln/Calciner/Preheater

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Kiln/Calciner/Preheater
Emissions Control Equipment ID Number: See Table: Kiln/Calciner/Preheater
Emissions Control Equipment Description: See Table: Kiln/Calciner/Preheater
Continuous Emissions Monitors ID Numbers: See Table: Kiln/Calciner/Preheater

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Table: Kiln/Calciner/Preheater

Emission Point Number	Associated Emission Unit Number	Emission Unit Description	Control Equipment Number	Control Equipment Description	Continuous Emissions Monitor Number	Raw Material	Rated Capacity
EP25	EU25	Kiln/Calciner/ Preheater	CE25	ESP	ME25	Raw Mix and Fuel	250 TPH
EP27			CE27	Baghouse	ME27		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified in Table: Kiln/ Calciner/Preheater -*Emission Limits*..

Table: Kiln/Calciner/Preheater -Emission Limits

Emission Point Number	Associated Emission Unit Number	Opacity Limit	PM_{10} Limit (lb/hr)	PM Limit (lb./ton of feed)	Dioxin and Furan Limit (ng./dscm)	SO_2 Limit (lb./MMBtu)	Construction Permit No.
EP25	EU25	20%	52.8	0.30	0.4	6	77-A-221-S2
EP27		20%(1)	29.7				77-A-222-S4

(1) If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Opacity
Emission Limit(s): 20%
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Kiln/Calciner/ Preheater-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63.1343

Pollutant: Particulate Matter
Emission Limit(s): 0.30 lb./ton of feed
Authority for Requirement: Iowa DNR Construction Permits specified in Table Kiln/Calciner/ Preheater-Emission Limits
567 IAC 23.1(4)"bl"
40 CFR 63.1343

Pollutant: PM_{10}
Emission Limit(s): As specified in Table: Kiln-Emission Limits
Authority for Requirement: Iowa DNR Construction Permits specified in Table: Kiln/Calciner/ Preheater-Emission Limits

Pollutant: Sulfur Dioxide (SO_2)
Emission Limit(s): 6 lb./MMBtu
Authority for Requirement: Iowa DNR Construction Permit 77-A-222-S4
567 IAC 23.3(3)"a"

Pollutant: Dioxins and Furans (D/F)[(2)]
Emission Limit(s): 0.4 ng./dscm (1.7E-10 gr./dscf) (TEQ)
Authority for Requirement: Iowa DNR Construction Permit 77-A-222-S4
567 IAC 23.1(4)"bl"
40 CFR 63.1343(b)(3)

[(2)] Limit is corrected to 7% oxygen and when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 ^{o}C (400 ^{o}F) or less. If the average of the performance test run average temperatures at the inlet to the particulate matter control device is greater than 204 ^{o}C (400 ^{o}F) then the D/F standard is 0.2 ng/dscm (8.7 E-11 gr./dscf)(TEQ) corrected to 7% oxygen.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating limits:

1. In accordance with Subpart F (Standards of Performance for Portland Cement Plants), the facility shall record its daily production and kiln feed rates.
2. The throughput shall not exceed 1,850,000 short tons of raw kiln feed per twelve (12) month rolling period and 925,000 short tons of clinker per twelve (12) month rolling period.
3. The kiln shall be operated such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, meets the requirements of 40 CFR §63.1344 (Subpart LLL-National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).
4. The facility shall operate the kiln such that the temperature of the gas at the inlet to the alkali bypass particulate matter control device (PMCD) does not exceed the applicable temperature per 40 CFR §63.1344.

5. In accordance with 40 CFR §63.1349(c), PM performance tests shall be repeated every 5 years.
6. In accordance with 40 CFR §63.1349(d), D/F performance tests shall be repeated every 30 months.
7. In accordance with 40 CFR §63.1349(e)(1) through (e)(3), PM and/or D/F performance tests shall be completed within 360 hours after a planned operational change that has been determined to have the the ability to impact the plants ability to affect compliance with the applicable PM and/or D/F standards.
8. In accordance with 40 CFR §63.1350(i), the facility shall conduct an inspection of the components of the combustion system of each kiln or in-line raw mill at least once per year.

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. The sulfur content (in lb/MMBTU) of all individual fuels and the total sulfur (in lb/MMBTU) of any combination of fuels that are fired in the kiln. The fuel analysis sent with the fuel shipment can be an adequate demonstration for this record.
2. The daily production rates and kiln feed rates.
3. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.
4. After the first twelve (12) months of operation determine the annual raw kiln feed throughput and clinker production on a rolling-12-month total for each month of operation.
5. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1350.
6. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1355.

Authority for Requirement: Iowa DNR Construction Permit 77-A-222-S4

Emission Point Characteristics
These emission points shall conform to the specifications listed below.

Emission Point EP25
Stack Height (feet): 240
Stack Diameter (feet): 7.0
Stack Exhaust Flow Rate (scfm): 206,000
Stack Temperature (^{o}F): 265
Vertical, Unobstructed Discharge Required: Yes ☒ No ☐
Authority for Requirement: Iowa DNR Construction Permit 77-A-221-S2

Emission Point EP27
Stack Height (feet): 160
Stack Diameter (inches): 84
Stack Exhaust Flow Rate (scfm): 77,000
Stack Temperature (^{o}F): 320
Vertical, Unobstructed Discharge Required: Yes ☒ No ☐
Authority for Requirement: Iowa DNR Construction Permit 77-A-222-S4

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Stack Testing:

Pollutant – Particulate Matter (PM) (NESHAP)
Stack Test to be Completed by (date) – December 4, 2007[(1)]
Test Method - 40 CFR 60, Appendix A, Method 5
Authority for Requirement – Iowa DNR Construction Permit 77-A-222-S4
40 CFR 63.1348
567 IAC 23.1(4)"bl"

Pollutant - Dioxins/Furans (D/F)
Stack Tests to be Completed by (date) – June 4, 2005 and December 4, 2007[(2)]
Test Method - 40 CFR 60, Appendix A, Method 23 [(3)]
Authority for Requirement - Iowa DNR Construction Permit 77-A-222-S4
40 CFR 63.1349(b)(3)
567 IAC 23.1(4)"bl"

[(1)] And every five years thereafter.
[(2)] And every 30 months thereafter.
[(3)] Test shall be done in order to meet compliance as outlined in 40 CFR 63.1349.

Continuous Emissions Monitoring:

In accordance with NSPS Subpart F and NESHAP Subpart LLL, the facility (plant number 17-01-005) shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The system shall be designed to meet the 40 CFR 60, Appendix B, Performance Specification 1 (PS1).

In accordance with NESHAP Subpart LLL [40 CFR §63.1350(f)], the facility (plant number 17-01-005) shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the alkali bypass at the inlet to or upstream of the alkali bypass particulate matter control device. Per 40 CFR §63.1350(f), the following shall be done:

- The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in 40 CFR §63.1349(b)(3)(iv).
- The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.
- The three-hour average temperature shall be calculated as the average of 180 successive one-minute average temperatures.
- Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
- When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three hour rolling average temperature must begin anew, without considering the previous recordings.
- The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

Authority for Requirement - Iowa DNR Construction Permit 77-A-222-S4

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity

see Appendix B.

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"
567 IAC 23.1(4)"bl"
40 CFR 63 1350(a)

Emission Point ID Number: EP26

Associated Equipment

Associated Emission Unit ID Numbers: EU26
Emissions Control Equipment ID Number: CE26
Emissions Control Equipment Description: Baghouse
Continuous Emissions Monitor ID Number: ME26

Emission Unit vented through this Emission Point: EU26
Emission Unit Description: Clinker Cooler
Raw Material/Fuel: Cement Clinker
Rated Capacity: 250 TPH

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 10% (1)
Authority for Requirement: Iowa DNR Construction Permit 77-A-094-S1
567 IAC 23.1(4)"bl"
40 CFR 63.1345

(1) If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limit(s): 0.1 lb./ton
Authority for Requirement: Iowa DNR Construction Permit 77-A-094-S1
567 IAC 23.1(4)"bl"
40 CFR 63.1345

Pollutant: PM_{10}
Emission Limit(s): 22.6 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 77-A-094-S1

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The throughput shall not exceed 1,850,000 short tons of raw kiln feed per twelve (12) month rolling period and 925,000 short tons of clinker per twelve (12) month rolling period.

Authority for Requirement: Iowa DNR Construction Permit 77-A-094-S1

Section V(2) Iowa Department of Natural Resources
Administrative Consent Order No. 1999-AQ-32

Reporting & Record keeping: All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.
2. Monitoring for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1350.
3. Recordkeeping for NESHAP Subpart LLL at the facility (plant number 17-01-005) shall be done per 40 CFR §63.1355.
4. After the first twelve (12) months of operation determine the annual raw kiln feed throughput and clinker production on a rolling-12-month total for each month of operation.

Authority for Requirement: Iowa DNR Construction Permit 77-A-094-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 85
Stack Diameter (inches): 96
Stack Exhaust Flow Rate (scfm): 107,600
Stack Temperature (^{o}F): 210
Vertical, Unobstructed Discharge Required: Yes ☒ No ☐
Authority for Requirement: Iowa DNR Construction Permit 77-A-094-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Continuous Emissions Monitoring:

Pollutant - Opacity
Operational Specifications – 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Date of Initial System Calibration and Quality Assurance – January 1990
Ongoing System Calibration/Quality Assurance - 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Reporting & Record keeping - 40 CFR 63 Subpart A and 40 CFR 60, Appendix B PS-1
Authority for Requirement – 567 IAC 23.1(3)"bl"
40 CFR 63.1350(d)

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity **see Appendix B.**

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"
567 IAC 23.1(4)"bl"
40 CFR 63 1350(a)

Emission Point ID Number: EP28

Associated Equipment

Associated Emission Unit ID Numbers: EU28, EU29
Emissions Control Equipment ID Number: CE28
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: EU28
Emission Unit Description: Kiln Dust Disposal Tank
Raw Material/Fuel: Kiln Dust
Rated Capacity: 8 TPH

Emission Unit vented through this Emission Point: EU29
Emission Unit Description: Kiln Dust Loadout
Raw Material/Fuel: Kiln Dust
Rated Capacity: 8 TPH

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%(1)
Authority for Requirement: Iowa DNR Construction Permit 77-A-361-S2
567 IAC 23.3(2)"d"

(1) If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limits: 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permit 77-A-361-S2
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limits: 1.0 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 77-A-361-S2

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height (feet): 72
Stack Diameter (inches): 18
Stack Exhaust Flow Rate (scfm): 5,800
Stack Temperature (^{o}F): 70
Vertical, Unobstructed Discharge Required: Yes ☐ No ☒
Authority for Requirement: Iowa DNR Construction Permit 77-A-361-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP55

Associated Equipment

Associated Emission Unit ID Numbers: EU55
Emissions Control Equipment ID Number: CE55
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: EU55
Emission Unit Description: Limestone Drilling
Raw Material/Fuel: Limestone
Rated Capacity: 900 TPH

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%(1)
Authority for Requirement: Iowa DNR Construction Permit 99-A-179-S1
567 IAC 23.3(2)"d"

(1) Per DNR Air Quality Policy 3-b-08, Opacity Limits, an exceedence of the indicator opacity of (10%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedence. The permit holder shall also file an "indicator opacity exceedence report" with the DNR field office and keep records as required in the policy. If exceedences continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter
Emission Limits: 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permit 99-A-179-S1
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limits: 0.6 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 99-A-179-S1

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height (feet): 11.5
Stack Diameter (feet): 0.5 X 0.67
Stack Exhaust Flow Rate (scfm): 3,500
Stack Temperature (^{o}F): Ambient
Discharge Style: Downward
Authority for Requirement: Iowa DNR Construction Permit 99-A-179-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP55A

Associated Equipment

Associated Emission Unit ID Numbers: EU55

Emission Unit vented through this Emission Point: EU55A
Emission Unit Description: Quarry Blasting
Raw Material/Fuel: Limestone
Rated Capacity: 900 TPH

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Periodic Monitoring Requirements
The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP62

Associated Equipment

Associated Emission Unit ID Number: EU62
Emissions Control Equipment ID Number: CE62
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: EU62
Emission Unit Description: Coal Mill
Raw Material/Fuel: Coal
Rated Capacity: 8.4 TPH

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 20%[(1)]
Authority for Requirement: Iowa DNR Construction Permit 87-A-089-S2
567 IAC 23.1(2)"v"
40 CFR 60.252(c)

[(1)] If opacity greater than that observed in the initial performance test (0%) is viewed other than startup, shutdown, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard.

Pollutant: Particulate Matter
Emission Limits: 0.1 gr./scf
Authority for Requirement: Iowa DNR Construction Permit 87-A-089-S2
567 IAC 23.3(2)"a"

Pollutant: PM_{10}
Emission Limits: 0.22 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 87-A-089-S2

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height (feet): 50
Stack Diameter (inches): 26
Stack Exhaust Flow Rate (scfm): 800
Stack Temperature (^{o}F): 150
Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 87-A-089-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. Opacity shall be observed to ensure that no visible emissions occur during the material handling operation of the unit. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity (>20 %) is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake opacity readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP92

Associated Equipment

Associated Emission Unit ID Numbers: EU92
Emissions Control Equipment ID Number: CE92
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: EU92
Emission Unit Description: Secondary Fuel Receiving
Raw Material/Fuel: Secondary Fuel
Rated Capacity: 110 TPH

Applicable Requirements

BACT Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 5%[(1)]
Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P
567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limits: 0.01 gr./dscf
Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P

Pollutant: PM_{10}
Emission Limits: 0.01 gr./dscf
Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P

[(1)] The averaging period for this standard is one (1) hour.

Other Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 10%
Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P
567 IAC 23.1(4)"bl"
40 CFR 63.1348

Pollutant: PM_{10}
Emission Limits: 0.34 lb./hr
Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

The facility is required to schedule a PM_{10} compliance test within thirty (30) days if it exceeds the one (1) hour, 5% BACT opacity limit.

Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P

Reporting & Record keeping:
All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The records shall show the following:

1. Recordkeeping for NESHAP 40 CFR 63 Subpart LLL at the facility shall be done per 40 CFR 63.1355.

2. Copies of the excess emissions reports required per NSPS Subpart F and NESHAP Subpart LLL.

Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 36.4
Stack Opening, (inches, dia.): 18
Exhaust Flow Rate (scfm): 4,000
Exhaust Temperature (°F): 70
Discharge Style: Obstructed vertical
Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements

The facility shall check the opacity as described in 40 CFR 63.1350 ((a)(4)(i-vii) and (e) of **Appendix C-Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-Monitoring Requirements**.

Authority for Requirement: Iowa DNR Construction Permit 03-A-985-P
567 IAC 23.1(4)"bl"
40 CFR 63.1350

Stack Testing:

Pollutant – PM (BACT)
Stack Test to be Completed by (date) – Within 60 days of achieving maximum Production rate
Test Method – 40 CFR 51, Iowa Compliance Sampling Method 5
Authority for Requirement - Iowa DNR Construction Permit 03-A-985-P

Pollutant – PM_{10}
Stack Test to be Completed by (date) – Within 60 days of achieving maximum Production rate
Test Method – 40 CFR 51, Appendix M, 201A with 202
Authority for Requirement - Iowa DNR Construction Permit 03-A-985-P

Pollutant – Opacity
Stack Test to be Completed by (date) – Within 60 days of achieving maximum Production rate
Test Method – 40 CFR 60, Appendix A, Method 9
Authority for Requirement – Iowa DNR Construction Permit 03-A-985-P
567 IAC 23.1(4)"bl"
40 CFR 63.1349(b)(2)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

Relevant requirements of O & M plan for this equipment: Particulate Matter and Opacity-**see Appendix B.**

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 23.1(4)"bl"
40 CFR 63.1350(a)

IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

G2. Permit Expiration

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the

identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
a. Form 1.0 "Facility Identification";
b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
c. Form 5.0 "Title V annual emissions summary/fee"; and
d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
a. Form 1.0 "Facility Identification";
b. Form 5.0 "Title V annual emissions summary/fee";
c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.

8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

G8. Duty to Provide Information

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

G9. General Maintenance and Repair Duties

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:

a. The date, place and time of sampling or measurements
b. The date the analyses were performed.
c. The company or entity that performed the analyses.
d. The analytical techniques or methods used.
e. The results of such analyses; and
f. The operating conditions as existing at the time of sampling or measurement.
g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)

2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance

records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
a. Comply with all terms and conditions of this permit specific to each alternative scenario.
b. Maintain a log at the permitted facility of the scenario under which it is operating.
c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

G11. Evidence used in establishing that a violation has or is occurring.

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.
1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:
a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
b. Compliance test methods specified in 567 Chapter 25; or
c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.
2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
a. Any monitoring or testing methods provided in these rules; or
b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. 567 IAC 21.5(1)-567 IAC 21.5(2)

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess

emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.

ii. The estimated quantity of the excess emission.

iii. The time and expected duration of the excess emission.

iv. The cause of the excess emission.

v. The steps being taken to remedy the excess emission.

vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.

ii. The estimated quantity of the excess emission.

iii. The time and duration of the excess emission.

iv. The cause of the excess emission.

v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.

vi. The steps that were taken to limit the excess emission.

vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The facility at the time was being properly operated;

c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and

d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.

b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);

c. The changes are not modifications under any provisions of Title I of the Act and the changes

do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
d. The changes are not subject to any requirement under Title IV of the Act.
e. The changes comply with all applicable requirements.
f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
i. A brief description of the change within the permitted facility,
ii. The date on which the change will occur,
iii. Any change in emission as a result of that change,
iv. The pollutants emitted subject to the emissions trade
v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
vii. Any permit term or condition no longer applicable as a result of the change.
567 IAC 22.110(1)
2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*
3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*
4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.
a. An administrative permit amendment is a permit revision that is required to do any of the following:
i. Correct typographical errors
ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
iii. Require more frequent monitoring or reporting by the permittee; or
iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.

b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.

c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Permit Modification.

a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:

i. Do not violate any applicable requirements

ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.

iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.

iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;

v. Are not modifications under any provision of Title I of the Act; and

vi. Are not required to be processed as significant modification.

b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:

i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.

ii. The permittee's suggested draft permit

iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and

iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modifi cation application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping

permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. *567 IAC 22.111-567 IAC 22.113* The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.105(1)"a"(4)*

G19. Duty to Obtain Construction Permits

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. *567 IAC 22.1(1)*

G20. Asbestos

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when conducting any renovation or demolition activities at the facility. *567 IAC 23.1(3)"a", and 567 IAC 23.2*

G21. Open Burning

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. *567 IAC 23.2 <u>except</u> 23.2(3)"h"; 567 IAC 23.2(3)"h" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.

b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.

c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.

d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to June 25, 1993.
c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*

3. A permit shall be reopened and revised under any of the following circumstances:
a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to June 25, 1993, provided that the reopening may be stayed pending judicial review of that determination;
b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
3. A permit shield shall not alter or affect the following:
a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to

other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with an applicable requirement. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the

occurrence of an emergency due to the effects of these contaminants on the health of persons. *567 IAC 26.1(1)*

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits
EPA Region 7
Air Permits and Compliance Branch
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1
909 West Main – Suite 4
Manchester, IA 52057
(563) 927-2640

Field Office 2
P.O. Box 1443
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

Field Office 3
1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

Field Office 4
1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

Field Office 5
401 SW 7th Street, Suite I
Des Moines, IA 50309
(515) 725-0268

Field Office 6
1023 West Madison Street
Washington, IA 52353-1623
(319) 653-2135

Polk County Planning & Development
Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

Linn County Public Health Dept.
Air Pollution Control Division
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

Appendix A: Administrative Consent Order No. 1999-AQ-32

IOWA DEPARTMENT OF NATURAL RESOURCES
Administrative Consent Order
ISSUED TO: Lehigh Portland Cement Company

IN THE MATTER OF: LEHIGH PORTLAND CEMENT COMPANY	ADMINISTRATIVE CONSENT ORDER NO. 1999-AQ-32

TO: LEHIGH PORTLAND CEMENT COMPANY
Verne Stuessy
Acting Plant Manager
700 25th Street N.W.
Mason City, Iowa 50401

LEHIGH PORTLAND CEMENT COMPANY
c/o CT Corporation System, Registered Agent
2222 Grand Avenue
Des Moines, Iowa 50312

I. SUMMARY

This Administrative Consent Order is entered into between the Iowa Department of Natural Resources (DNR) and Lehigh Portland Cement Company (Lehigh) for the purpose of addressing alleged monitored violations of the National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM-10) in Mason City, Iowa. This Administrative Consent Order supersedes Administrative Order 97-AQ-18, which is hereby withdrawn.

The parties designate the following representatives for purposes of communications regarding and notices required by this Administrative Consent Order:

FOR Iowa DNR:

Doug Campbell
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Des Moines, Iowa 50322
Ph: 515/281-8930
FAX: 515/242-5094

FOR Lehigh Portland Cement Company:

Verne Stuessy, Acting Plant Manager
Lehigh Portland Cement Company
700 – 25th Street N.W.
Mason City, Iowa 50401
Ph: 515/421-3400
FAX: 515/421-3404

Either party may change its designated representative at any time by providing written notice to the other party.

II. NO ADMISSION

While Lehigh agrees to comply with the requirements contained herein, it makes no admission as to the Statement of Facts and Conclusions of Law and hereby denies the same.

III. STATEMENT OF FACTS

DNR finds as follows:

1. The 24-hour average PM-10 NAAQS is 150 micrograms per cubic meter (ug/m^3). DNR monitored six exceedances of this standard at a DNR monitoring site located at the intersection of 17^{th} and Quincy in Mason City, Iowa. On May 10, May 12, and December 29, 1993, this monitoring site recorded 24-hour average PM-10 concentrations of 174, 172, and 178 ug/m^3, respectively. On February 22, 1994, the same monitoring site recorded a 24-hour average PM-10 concentration of 160 ug/m^3. On December 18, 1995, and March 5, 1996, the same monitoring site recorded 24-hour average PM-10 concentrations of 239 and 286 ug/m^3, respectively.

2. Lehigh is a cement manufacturer located at 700 25^{th} Street N.W. in Mason City, Iowa, which is northwest of the 17^{th} and Quincy PM-10 monitoring site. Air dispersion modeling of this Lehigh facility has been conducted. This modeling has established that Lehigh is a contributor to the PM-10 levels monitored.

3. Lehigh is not the sole contributor of PM-10 levels in Mason City and other contributors also are being asked to address this concern as well.

4. DNR and Lehigh and other contributors have cooperated in an effort to address the levels of PM-10 in Mason City. For that purpose, DNR and Lehigh have agreed to enter into this Administrative Consent Order.

IV. CONCLUSIONS OF LAW

DNR concludes as follows:

1. This Administrative Consent Order is issued pursuant to the provisions of Iowa Code sections 455B.134(9) and 455B.138(1), which authorize the Director to issue any administrative orders necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division II, and the rules promulgated and permits issued pursuant thereto, and to prevent, abate, and control air pollution.

2. The PM-10 emission sources located at Lehigh in Mason City, Iowa, include "air contaminant sources" as defined by Iowa Code section 455B.131(2), and "stationary sources" and "fugitive dust" sources as defined by 567 Iowa Administrative Code (I.A.C.) 20.2.

3. According to 567 I.A.C. 28.1, the ambient air quality standards for the State of Iowa shall be the National Primary and Secondary Ambient Air Quality Standards located at 40 C.F.R. Part 50, as amended through July 18, 1997.

4. According to the provisions of 40 C.F.R. 50.6(a), the primary and secondary 24-hour ambient air quality standard for PM-10 is 150 ug/m^3, 24-hour average concentration. The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 ug/m^3, as determined in accordance with 40 C.F.R. Part 50, Appendix K, is equal to or less than one. In this case, the observed number of days per calendar year with a 24-hour average concentration above 150 ug/m^3, during the period 1993 through 1995, is greater than one, which constitutes a violation of this standard.

5. An exceedance of the NAAQS for PM-10 constitutes "air pollution" as defined by Iowa Code section 455B.131(3).

6. In accordance with the provisions of Iowa Code section 455B.134(9), the Director shall issue orders consistent with the rules to cause the abatement or control of air pollution.

7. According to the provisions of 567 I.A.C. 22.1(1) and 567 I.A.C. 22.1(3), the owner or operator of a stationary source shall obtain a permit to install or alter equipment or control equipment unless otherwise exempt. Any modifications occurring as a result of this consent order and subject to the provisions of 567 I.A.C. chapter 22 shall require a construction permit or shall meet the requirements of a construction permit exemption contained in the provisions of 567 I.A.C. 22.1(2).

8. According to the provisions of 567 I.A.C. 23.3(2)"c"(1), no person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. "Reasonable precautions" are defined in this rule.

V. ORDER

THEREFORE, DNR orders and LEHIGH AGREES to the following:

1. Within 120 days of the effective date of this Administrative Consent Order, a continuous fenceline with controlled access gates or a physical barrier, specifically a vertical wall and/or embankment under a railroad trestle, shall be erected to enclose the plant area as depicted in Exhibit "A", which is attached to this Administrative Consent Order and by this reference made a part hereof. The fenceline shall be of a type designed to preclude public access to the facility property. As proposed by Lehigh, the portion of 25th Street that lies within the Lehigh facility property lines shall be vacated and included within the confines of the continuous fenceline and physical barrier, such that the general public is not allowed access.

2. Within 90 days of entering into this Administrative Consent Order, Lehigh shall submit to DNR air quality construction permit applications which include the emission rates, hours of operation, throughput rates, stack parameters, and stack configurations listed in Exhibit "B." By this reference, Exhibit "B" is made a part hereof. Any required modifications to the sources shall be completed within 60 days of the issuance of the permits (unless specifically stated otherwise in this order).

3. The emission sources listed in Exhibit "C" shall be limited to the daily and calendar year throughputs listed in Exhibit "C." By this reference, Exhibit "C" is made a part hereof. The total daily throughput and daily throughput rates for each of the sources listed in Exhibit "C" shall be entered in a daily log to demonstrate compliance with the daily and annual throughput limits. For sources 7A, 56A, 57A, 73A, 74A, and 75A, if the sources operate within the maximum hourly throughput time period indicated in Exhibit "C", then the source daily log shall be used to demonstrate compliance. If these sources operate at other times during any day, then compliance will be demonstrated for that calendar day by entering the hourly throughput and total daily throughput rates for each of these sources in daily logs to demonstrate compliance with the daily and annual throughput limits. Daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

4. The coal crusher (source ID 40) shall be operated only in an enclosed structure with all access doors and any other openings closed during normal operations, except for doors during ingress and egress.

5. Storage Piles:

(i). Within 60 days of the effective date of this Administrative Consent Order, Lehigh shall locate the storage pile bases as designated in Exhibit "D" and shall limit the size of the storage piles to no greater than the acreages designated in Exhibit "D." Except as otherwise provided in this paragraph 5, the storage piles designated in Exhibit "D" shall be the only storage piles located within the facility. Exhibit "D" shall by this reference become a part hereof. Lehigh may relocate a pile specified in Exhibit "D" only after providing written notice to DNR and submitting the results of computer dispersion modeling showing that no exceedances of the PM-10 NAAQS would result. If an exceedance of the PM-10 NAAQS would result based on the computer dispersion modeling results, Lehigh shall not move the pile as proposed and the pile shall remain at the location designated in Exhibit "D".

(ii). Notwithstanding the requirements of paragraph 5(i), Lehigh may operate temporary piles of materials (not identified on Exhibit "D") that result from maintenance and other similar activities. No such temporary pile shall be maintained for more than one 72-hr period.

(iii). Notwithstanding the requirements of paragraph 5(i) and 5(ii), Lehigh may maintain temporary piles of overflow raw materials and product (not identified on Exhibit "D") that may result from unforeseen and unplanned operating conditions or problems. Lehigh shall take all reasonable measures to limit the size of any such pile and the fugitive emissions that result therefrom. No more than two such temporary piles may exist at one time. No such temporary pile shall be maintained for more than one (1) month. Lehigh shall maintain records that include the pile location, planned or actual pile size, pile material content, and the planned removal date, for each pile. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request. This record keeping shall be an on-going requirement and shall not terminate. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

6. Within 30 days of the effective date of this Administrative Consent Order, Lehigh shall implement speed controls designed to ensure that the average speed of the haul trucks on the limestone and clay haul roads (source IDs 56 and 57) does not exceed 18.5 miles per hour. The speed controls shall consist of a combination of speed limit signs, stop signs, and governors on the accelerators of each haul road truck, or other methods approved in writing by DNR.

7. The maximum number of round trips per day and per calendar year on the limestone haul road (source ID 56) for all of the haul trucks, combined, shall be limited to 70 and 17,640 trips, respectively. The number of round trips per day on the limestone haul road shall be entered in a daily log to demonstrate compliance with this requirement. Daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

8. Fugitive emissions from the limestone haul road (source ID 56) shall be controlled by applying a chemical dust suppressant. Applications of the selected chemical dust suppressant and the record keeping requirements described below shall begin within 30 days of the effective date of this Administrative Consent Order. A control efficiency of 90 percent shall be maintained on the first 1.41 miles of the limestone haul road from the quarry. This will require a ground inventory of 0.25 gallons of chemical dust suppressant per square yard. This section of the limestone haul road is 30 feet wide and 1.41 miles long, giving it a total area of 24,816 square yards. At least 6,204 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 1,241 gallons of the selected chemical dust suppressant shall be applied every calendar month with no more than 35 days between applications, to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts other than those specified above be applied, Lehigh shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations.

A control efficiency of 95 percent shall be maintained on the remaining length of the limestone haul road from 1.41 miles from the quarry to the primary limestone crusher (source ID 2). This will require a ground inventory of 0.25 gallons of chemical dust suppressant per square yard. The remaining limestone haul road is 30 feet wide and 2.89 miles long, giving it a total area of 50,864 square yards. At least 12,716 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 2,543 gallons of the selected chemical dust suppressant shall be applied not less than at least once every other week to maintain the ground inventory. This equates to 0.05 gallons of chemical dust suppressant per square yard.

If the selected chemical dust suppressant can not be applied because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated. Records of the applications shall be maintained and shall include the dates of each application, the chemical used, the application intensity (gals. / sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. If the selected chemical dust suppressant is not applied as planned, then the records should so indicate and provide an explanation. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request.

9. The maximum number of round trips per day and per calendar year on the clay haul road (source ID 57) for all of the haul trucks, combined, shall be limited to 130 and 1,667 trips, respectively. The number of round trips per day on the clay haul road shall be entered in a daily log to demonstrate compliance with this requirement. Daily logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

10. Fugitive emissions from the clay haul road (source ID 57) shall be controlled to an effective control efficiency of 95 percent by applying a chemical dust suppressant. Applications of the selected chemical dust suppressant and the record keeping requirements described below shall begin within 30 days of the effective date of this Administrative Consent Order. A control efficiency of 95 percent will require a ground inventory of 0.25 gallons of the selected chemical dust suppressant per square yard. The clay haul road is 30 feet wide and 0.9 miles long, giving it a total area of 15,840 square yards. At least 3,960 gallons of the selected chemical dust suppressant shall be applied initially to achieve this ground level inventory. At least 792 gallons of the selected chemical dust suppressant shall be applied not less than once every other week to maintain the ground inventory. This equates to 0.05 gallons of the selected emulsion per square yard. In the event that the manufacturer or distributor of a chemical dust suppressant recommends that amounts other than those specified above be applied, Lehigh shall notify DNR in writing of the change in application rates and the manufacturer's/distributor's recommendations**.**

If the selected chemical dust suppressant can not be applied because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the chemical dust suppressant, could create hazardous driving conditions, then the chemical dust suppressant application shall be postponed and applied as soon after the scheduled application date as the conditions preventing the application have abated. Records of the applications shall be maintained and shall include the dates of each application, the chemical used, the application intensity (gals. / sq.yd.), dilution ratio, the areas treated, the operator's initials, and documentation of road and weather conditions, if necessary. If the selected chemical dust suppressant is not applied as planned, then the records should so indicate and provide an explanation. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request.

It is not uncommon for this clay haul road to go unused for periods greater than one-half month. In the event Lehigh does not use the clay haul road for a period greater than one-half month, Lehigh shall not be required to apply the chemical dust suppressant as provided in the above paragraph, on the condition that such event is noted and explained in the records required herein and that, prior to use, an application will be made, weather permitting and requiring.

11. The maximum number of round trips per day and per calendar year on the paved haul road from the product loadout silos to US Highway 65 (source IDs 801-812) for all haul trucks, combined, shall be limited to the values listed below.

Month	Maximum Number of Trips per Day
January	80
February	69
March	200
April	250
May	250
June	250
July	203
August	250
September	250
October	250
November	250
December	250
Calendar Year	Maximum Number of Trips per Year
January through December	37,302

The number of round trips per day on this haul road shall be entered into a monthly log to demonstrate compliance with this requirement. Monthly logs shall be retained for a period of two years following the date of such entries and shall be made available to the DNR upon request. Record keeping shall commence within 30 days of the effective date of this Administrative Consent Order.

12. Fugitive emissions of the paved haul road from the product loadout silos to US Highway 65 (source IDs 801-812) shall be controlled to an effective control efficiency of 80 percent by water flushing followed by sweeping. Water flushing followed by sweeping applications and the record keeping requirements described below shall begin within 30 days of the effective date of this Administrative Consent Order. Using an application rate of 0.48 gallons per square yard, this haul road shall require a water flushing followed by sweeping application after every 362 vehicle passes to maintain an 80 percent control efficiency. Based on a worse-case round trip estimate of 222 trips per day, the water flushing followed by sweeping will have to be accomplished every two days. The haul road is 24 feet wide and 2072 feet long, giving it a total area of 5,525 square yards. Based on an application rate of 0.48 gallons of water per square yard, 2,652 gallons of water will be required for each application.

If water flushing followed by sweeping can not be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather, in combination with the application of the water, could create hazardous driving conditions, then the water flushing and sweeping

shall be postponed and accomplished as soon after the scheduled date as the conditions preventing the application have abated. Additionally, water flushing and sweeping need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24-hr time period. Records of the applications shall be maintained and shall include the dates and times of each application, the calculated application intensity, the areas treated, the operator's initials, and documentation road and weather conditions, if necessary. If the water flushing is not accomplished because ambient air temperatures are less than 35^0 F during the entire day, or precipitation exceeding 0.2 inches has occurred in the proceeding 24 hours, then the records should indicate this. The records shall be retained for a period of two years following the date of the above entries and shall be made available to the DNR upon request.

13. Lehigh shall submit to the DNR Field Office #2 written quarterly reports detailing progress toward the completion of the requirements of Sections V.1., V.2., V.5., and V.6. of this Administrative Consent Order. The quarterly reports shall be due no later than 30 days following the close of each quarter. The first report shall be due 30 days following the end of the quarter in which the Administrative Consent Order is effective. Quarterly reporting may be terminated following submittal of a final report and written request to the DNR, and a written response from the DNR stating that all such described requirements of this Administrative Consent Order have been completed. **Record keeping required by this Administrative Consent Order shall be an on-going requirement and shall not terminate**.

VI. WAIVER OF APPEAL RIGHTS

This Administrative Consent Order is entered into knowingly and with the consent of Lehigh. For that reason, Lehigh waives its right to appeal this Administrative Consent Order or any part thereof.

VII. NONCOMPLIANCE

Failure to comply with this Administrative Consent Order may result in the imposition of administrative penalties or referral to the Attorney General's office to obtain injunctive relief and civil penalties pursuant to the provisions of Iowa Code section 455B.146. By agreeing to this Administrative Order, Lehigh is not agreeing to such action or penalties.

VIII. TERMINATION OF THIS ADMINISTRATIVE CONSENT ORDER

This Administrative Consent Order shall terminate upon a showing by Lehigh, acceptable to DNR and responded to in writing by the DNR, that it has complied with the obligations contained herein or as may otherwise be agreed upon by the parties.

IX. EFFECTIVE DATE

The effective date of this Administrative Consent Order is defined as the date on which the Director of the DNR signs this Administrative Consent Order. Lehigh will be notified of this date following the signature of this Administrative Consent Order by the Director, and will be provided with a signed copy.

PAUL W. JOHNSON, DIRECTOR
IOWA DEPARTMENT OF NATURAL RESOURCES

Dated this 2 day of September, 1999.

for LEHIGH PORTLAND CEMENT COMPANY

Dated this 23 day of August, 1999.

EXHIBIT "B"

Point Source Emission Rates and Stack Parameters
Lehigh Portland Cement Company

Source ID	Source Description	Emission Rate (g/s)	Stack Height (m)	Exit Temp (K)	Exit Velocity (m/s)	Stack Diameter (m)	Rain Cap or Angled Vent?
2	Limestone Primary Crushing	0.30240	18.29	293.0	0.00	1.11	Yes
3	Primary Screening System	0.12960	16.76	293.0	0.00	0.77	Yes
5	Limestone Secondary Crushing	0.10260	16.76	293.0	0.00	0.46	Yes
6	Limestone Transfer Points	0.06480	16.76	293.0	0.00	0.49	Yes
8	Limestone Transfer Points	0.04536	12.19	293.0	0.00	0.31	Yes
9	Limestone Transfer Points	0.06787	24.38	293.0	0.00	0.43	Yes
10	Limestone Transfer Points	0.06804	24.38	293.0	0.00	0.41	Yes
11	Limestone Transfer Points	0.10891	24.38	293.0	0.00	0.72	Yes
12	Limestone Transfer Points	0.04536	24.38	293.0	0.00	0.41	Yes
13	Limestone Transfer Points	0.04536	12.19	293.0	0.00	0.34	Yes
15	Clay Crushing System	0.09991	14.30	293.0	0.00	0.76	Yes
18	Clay Transfer Point	0.17775	33.53	366.5	0.00	0.61	Yes
19	Raw Mix Transfer Point	0.17280	57.91	322.1	0.00	0.60	Yes
20	Raw Mix Transfer Point	0.03657	33.53	366.5	0.00	0.62	Yes
21	Raw Mix Transfer Point	0.03657	30.48	366.5	0.00	0.41	Yes
22	Raw Mix Transfer Point	0.11588	33.53	366.5	0.00	0.41	Yes
23	Raw Mix Transfer Point	0.11115	33.53	366.5	0.00	0.41	Yes
24	Raw Mix Transfer Vent	0.16846	57.91	366.5	0.00	0.61	Yes
26	Clinker Cooler	2.85	25.91	442.6	13.99	2.44	No
27	Kiln Bypass Stack	3.74	48.77	505.4	12.62	2.13	No
28	Kiln Dust Disposal Tank	0.12604	21.94	293.0	16.09	0.46	No
33	Clinker Outhaul Transfer	0.06480	30.48	293.0	0.00	0.20	Yes
34	Clinker Bin to Truck Loadout	0.02160	30.48	293.0	0.00	0.34	Yes
35	Clinker Outhaul Transfer	0.17280	54.86	293.0	0.00	0.60	Yes
36	Clinker Withdrawal Transfer	0.08640	9.14	293.0	0.00	0.42	Yes
37	Clinker Transfer Point	0.02160	9.14	293.0	0.00	0.17	Yes
38	Clinker Transfer	0.02251	16.76	293.0	0.00	0.20	Yes
39	Clinker Transfer Elevator	0.13608	24.38	293.0	29.34	1.00	No
41	No. 3 Finishing Mill West Vt.	0.14580	24.38	293.0	0.00	0.46	Yes
42	No. 3 Finishing Mill West Vt.	0.14580	24.38	293.0	0.00	0.46	Yes
43	No. 5 Finishing Mill	0.18360	24.38	366.5	0.00	0.52	Yes
44	No. 6 Finishing Mill	0.18360	24.38	366.5	0.00	0.46	Yes
45	No. 4 Finishing Mill	0.64800	28.95	366.5	24.38	1.22	No
46	No. 4 Finishing Mill Conveyor	0.09720	25.91	310.9	0.00	0.71	Yes
47	Storage Silo Vent System	0.16200	45.72	293.0	0.00	0.66	Yes
48	Finished Cement Transfer Elv	0.06480	45.72	293.0	0.00	0.31	Yes
50	Cement Bulk Loadout	0.02160	45.72	293.0	0.00	0.20	Yes
51	Finished Cement Loadout	0.02160	45.72	293.0	0.00	0.20	Yes
52	Rail/Truck Loading System	0.13608	45.72	293.0	0.00	0.53	Yes
53	Finished Cement Loadout Spout	0.13608	45.72	293.0	0.00	0.20	Yes
62	Front Coal Mill D.C.	0.02808	15.24	338.7	17.92	0.66	No

EXHIBIT "B"

Point Source Calendar Year Limitations
Lehigh Portland Cement Company

Source ID	Source Description	Maximum Calendar Year Hours of Operation (hours/year)
2	Limestone Primary Crushing	4380
3	Primary Screening System	4380
5	Limestone Secondary Crushing	4380
6	Limestone Transfer Points	4380
8	Limestone Transfer Points	7884
9	Limestone Transfer Points	7884
10	Limestone Transfer Points	7884
11	Limestone Transfer Points	7884
12	Limestone Transfer Points	876
13	Limestone Transfer Points	876
15	Clay Crushing System	876
18	Clay Transfer Point	7884
19	Raw Mix Transfer Point	7884
20	Raw Mix Transfer Point	7884
21	Raw Mix Transfer Point	7884
22	Raw Mix Transfer Point	7884
23	Raw Mix Transfer Point	7884
41	No. 3 Finishing Mill West Vt.	7534
42	No. 3 Finishing Mill West Vt.	7534
43	No. 5 Finishing Mill	7534
44	No. 6 Finishing Mill	7534
45	No. 4 Finishing Mill	7534
46	No. 4 Finishing Mill Conveyor	7534

Source ID	Source Description	Maximum Calendar Year Throughput (tons/year)
26	Clinker Cooler	1,850,000
27	Kiln Bypass Stack	1,850,000

EXHIBIT "C"

Maximum Throughput Rates for Uncontrolled Sources
Lehigh Portland Cement Company

Source ID	Source Description	Number of Transfers	Maximum Daily Throughput-Each Transfer (tons/day)	Maximum Calendar Year Throughput-Each Transfer (tons/year)
1	Railcar Unloading	3	7,200	200,000
7A	Limestone Transfer <> Storage Pile	1	19,200[a]	2,500,000
14A	Raw Material Transfer/Clay Storage Pile	2	12,000	200,000
14B	Raw Material Transfer/Clay Storage Pile	1	12,000	200,000
15A, 15B	Clay Crushing Fugitives	4	12,000	200,000
39-2 (239)	Gypsum/Anhydrite Bucket Transfer	2	3,600	100,000
39-3 (339)	Clinker Bucket Transfer	2	3,600	500,000
40	Coal Crusher	1	1,320	200,000
49	Rail Leg Loadout	1	300	5,000
56A	Limestone Transfer <> quarry to truck	2	16,000[b]	1,675,800
57A	Clay Transfer <> quarry to truck	2	12,000[c]	141,667
58A	Coal Transfer	1	7,200	200,000
59A	Sand Transfer <> delivery	2	12,000	2,190,000
59B	Sand Transfer <> to process	1	12,000	2,190,000
60A	Clay Transfer <> delivery	2	12,000	2,190,000
60B	Clay Transfer <> process	1	12,000	2,190,000
61A	Clay Transfer <> delivery	2	12,000	2,190,000
61B	Clay Transfer <> process	1	12,000	2,190,000
62-1 (162)	Coal Transfer System	4	1,320	481,800
63A	Kiln Dust Transfer	1	300	70,080
73A	Limestone Transfer <>process pile at crusher	1	19,200[a]	500,000
74A	Limestone Transfer <> at clay crusher	1	2,000[d]	70,000
75A	Clinker Transfer <> Craneway	1	1,200[e]	15,000
76A	Clinker, Gypsum, Slag Transfer <> east of finish mill building	1	3,600	50,000

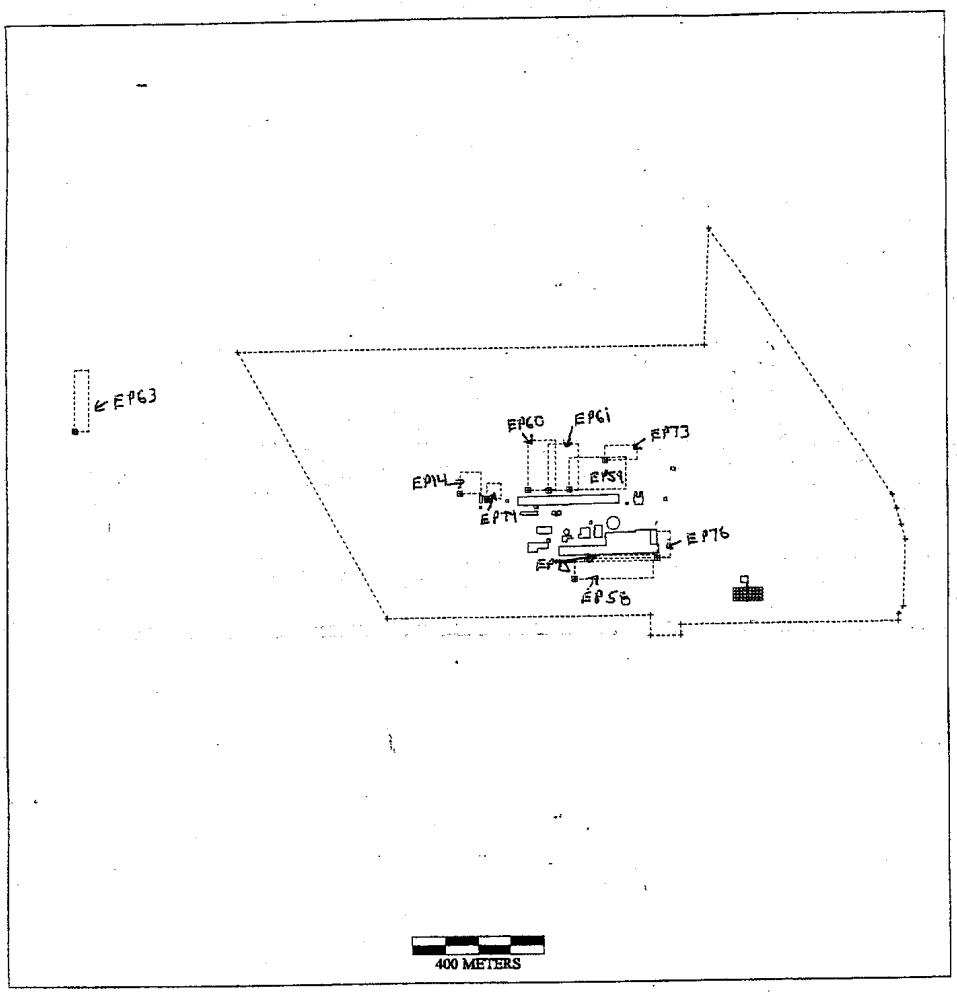
[a]Maximum hourly throughput will be 1,200 ton/hour for the period 7:00 a.m. through 11:00 p.m. and 750 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.
[b]Maximum hourly throughput will be 1,000 ton/hour for the period 7:00 a.m. through 11:00 p.m. and 666 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.
[c]Maximum hourly throughput will be 1,000 ton/hour for the period 8:00 a.m. through 8:00 p.m. and 460 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.
[d] Maximum hourly throughput will be 250 ton/hour for the period 8:00 a.m. through 4:00 p.m. and 83.3 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.
[e] Maximum hourly throughput will be 100 ton/hour for the period 7:00 a.m. through 7:00 p.m. and 50 ton/hour at other times. Maximum daily throughput will not be exceeded on any one day.

EXHIBIT “D”

Lehigh Storage Pile Data

Storage Pile ID/(Material)	Maximum Pile Size (acres)
14 (clay 1)	1
58 (coal)	3
59 (sand)	4
60 (clay 2)	3
61 (clay 3)	3
63 (kiln dust)	2
73 (quarry run limestone)	1
74 (quarry run limestone)	0.5
75 (clinker)	0.5
76 (clinker, gypsum, granulated blast furnace slag)	0.75

Exhibit "D", Page 2 of 2. Storage Pile Sizes and Locations (apprx)
Lehigh Portland Cement Company, Mason City, IA



Appendix B: Operation & Maintenance Plan

Lehigh Cement Company
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LEHIGH CEMENT COMPANY
Operation and Maintenance Plan

Mason City Facility
Portland Cement NESHAP

June 2002
Version 1.0

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6	FINISH MILL CONTROL ROOM

Document Version	Date	Description of Changes	Prepared By	Approved By
1.0	07/29/04	Initial issue.	David M. Eckhardt	

SECTION	TITLE	REVISION NUMBER	REVISION DATE
1	Introduction	0	
2	Regulatory Overview	0	
3	Responsibilities	0	
4	Periodic Audit of OMP	0	
A	In-Line Kiln/Raw Mill System and Alkali Bypass	0	
B	Clinker Cooler	0	
C	Finish Mill System	0	
D	Storage and Material Handling Systems	0	

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PROCEDURES

APPENDICES

1. INTRODUCTION

This Operation and Maintenance Plan ("OMP" or "Plan") has been developed to satisfy the requirements of 40 CFR 63.1350 and § 63.6(e)(1) and (e)(2). The purpose of the OMP is to ensure on-going compliance with the specific standards and requirements of 40 CFR Subpart LLL. As such, the focus of this OMP is on the operation, maintenance, and inspection of those source components, pollution control equipment, or monitoring devices that have a direct impact on the ability of affected sources to meet emission standards and requirements.

The basic structure of this OMP is based on the requirements of 40 CFR 63.1350(a). The appendices contain additional information, forms, references, and guidance intended to assist plant personnel with the implementation and upkeep of the OMP. The information in the appendices is not required by 40 CFR 63.1350(a) to be included as a part of the OMP and therefore should not be considered legally binding. It is the intention of Lehigh Cement Company to append, modify, and/or delete anything contained in these appendices as necessary without notifying or receiving approval from the Administrator.

2. REGULATORY OVERVIEW

As the result of a June 14, 1999 U.S. Environmental Protection Agency ("USEPA") rulemaking, Lehigh Cement Company (hereinafter referred to as "LCC") will be subject to additional emissions standards for hazardous air pollutants. The National Emissions Standards for Hazardous Air Pollutants for Source Categories; Portland Cement Manufacturing Industry (hereinafter referred to as the "PC NESHAP") or 40 CFR subpart LLL establishes limits for emissions of particulate matter (as a surrogate for HAP metals), opacity, and dioxins/furans (D/F) for existing portland cement plants. The compliance date for existing facilities is June 14, 2002.

LCC is a major source as defined in 40 CFR 63.2. As a major source, LCC is subject to emissions standards for the in-line kiln/raw mill, finish mills, raw material storage bins, clinker storage bins, finished product storage bins, conveying system transfer points, bagging systems, and bulk loading and unloading systems.

A. Basic Requirements for the OMP

As provided in §63.1350(a), the written operations and maintenance plan shall include the following information.

1. Procedures for the proper operation and maintenance of the affected source and air pollution control devices in order to meet the applicable emission limits and operating limits of the PC NESHAP;

2. Corrective actions to be taken when required by §63.1350(e). §63.1350(e) requires that the corrective actions specified in this plan for the raw mills, finish mills, mill sweeps, and air separator particulate matter control devices be initiated within one-hour;

3. Procedures to be used during an inspection of the components of the combustion system of the in-line kiln/raw mill at least once per year; and

4. Procedures to be used to periodically monitor affected sources subject to opacity standards under §§63.1346 and 63.1348. At LCC, these affected sources include each new and existing raw material, clinker, or finished product storage bin; conveying system transfer points; bagging systems; and bulk loading and unloading systems. These procedures must include the following -

    a. Conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A of 40 CFR part 60. The test must be conducted while the affected source is in operation.

    b. If no visible emissions are observed in six consecutive monthly tests for any affected source, the frequency of testing may be decreased from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, testing of that affected source must be resumed on a monthly basis and that schedule must be maintained until no visible emissions are observed in six consecutive monthly tests.

    c. If no visible emissions are observed during the semi-annual test for any affected source, the frequency of testing may be decreased from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, testing of that affected source shall be resumed on a monthly basis and that schedule shall be maintained until no visible emissions are observed in six consecutive monthly tests.

    d. If visible emissions are observed during any Method 22 test, a 6-minute test of opacity must be conducted in accordance with Method 9 of appendix A of 40 CFR part 60. The Method 9 test must begin within one hour of any observation of visible emissions.

B. Summary of Emissions Standards

A summary of the affected sources at LCC and applicable standards are summarized in Table 1 below. The compliance date for these affected sources is June 14, 2002.

Table 1. Summary of Affected Sources and Standards.

Affected Source	Pollutant	Emission Limit
In-Line Kiln / Raw Mill Including Alkali Bypass	PM	0.15 kg/Mg feed (dry basis)
	Opacity	20%
	D/F	• 0.20 ng/dscm TEQ **OR** • 0.40 ng/dscm TEQ (PM control device operating at ≤ 400°F)
	Temp - Mill On	(3-hr rolling avg) [1]
	Temp - Mill Off	(3-hr rolling avg) [1]
Clinker Cooler	PM	0.050 kg/Mg feed (dry basis)
	Opacity	10%
Finish Mills (including Air Separators)	Opacity	10%
Raw Material, Clinker, Finished Product Storage	Opacity	10%
Conveying System Transfer Points	Opacity	10%
Bulk Loading and Unloading Systems	Opacity	10%

[1] Operating parameter limits determined during D/F performance test. Performance testing for D/F must be repeated every 30 months. Therefore, the most recent D/F performance test results should be consulted to determine current operating parameter limits.

C. Compliance Demonstration Methods

A summary of the compliance demonstration requirements for each affected source group at LCC is summarized in Table 2 below. The compliance date for these affected source is June 14, 2002.

Table 2. Summary of Compliance Demonstration Requirements for Affected Sources.

Affected Source	Pollutant	Monitoring Requirement
In-Line Kiln / Raw Mill Including Alkali Bypass	PM	None [1]
	Opacity	Continuous Opacity Monitor
	D/F	Annual Combustion System Inspection
	Temperature	Continuous Temperature Monitor[2]
Clinker Cooler	Opacity	Continuous Opacity Monitor
Finish Mills	Opacity	Bag Leak Detection Systems **or** Daily 6-minute Method 22
Raw Material, Clinker, Finished Product Storage	Opacity	Monthly **or** Semi-Annual (as applicable) 1-minute Method 22

Conveying System Transfer Points	Opacity	Monthly **or** Semi-Annual (as applicable) 1-minute Method 22
Bulk Loading and Unloading Systems	Opacity	Monthly **or** Semi-Annual (as applicable) 1-minute Method 22

[1] EPA has deferred the requirement to install a PM CEM until a future rulemaking, at which time EPA will consider what performance specification requirements should be established. Performance testing on PM emissions from the in-line kiln/raw mill must be conducted every 5 years [40 CFR 63.1349(c)] to ensure the ability of the source to meet the PM emission limit while the operation and maintenance requirements contained in this plan will be used to ensure on-going compliance until such time as a PM CEMS is installed.
[2] The continuous temperature monitor must be calibrated quarterly.

3. RESPONSIBILTIES

Key responsibilities are assigned to allow for smooth implementation of this plan. Although various plant personnel may perform specific procedures, overall responsibilities are outlined below to assist plant personnel with OMP implementation and to establish a framework through which NESHAP compliance will be maintained.

A. Plant Manager

The Plant Manager has overall responsibility for NESHAP regulatory compliance. The Plant Manager is responsible for oversight of the air quality control program at the plant and for ensuring that the procedures in this plan are implemented and adhered to by plant personnel.

B. Production Supervisor

The Production Supervisor is responsible for day-to-day implementation of the O&M plan at the facility. The Production Supervisor will report to the Plant Manager on all matters of NESHAP compliance. Specific duties of the Production Supervisor might include:

1. Notify Maintenance Supervisor and Plant Manager of potential and/or actual non-compliance with emissions or monitoring standards;

2. Oversight of training for production employees on the procedures outlined in the O&M plan; and

3. Periodically review O&M plan in accordance with section 4 below and suggest updates to any procedures or appendices necessary to effectively implement the O&M plan.

C. Maintenance Supervisor

The Maintenance Supervisor will consult with plant personnel on inspection and maintenance needs of affected sources and associated pollution control equipment. The Maintenance Supervisor also provides guidance on the implementation and performance of this plan. Specific duties of the Maintenance Supervisor might include:

1. Schedule and review the inspection and preventative maintenance procedures included in this plan;

2. Receive and review specific inspection and maintenance procedures conducted by plant personnel;

3. Ensure that the necessary maintenance is carried out based on inspection results;

4. Ensure spare parts are maintained at the plant; and

5. Periodically review O&M plan in accordance with section 4 below and suggest updates to any procedures or appendices necessary to effectively implement the O&M plan.

D. Electrical Technician

The Electrical Technician is responsible for the proper operation, calibration, and maintenance of operating parameter monitoring equipment and continuous opacity monitoring equipment. Specific duties of the Electrical Technician might include:

1. Conduct or oversee the performance of quality control program as required by 40 CFR 63.8(d) and PS-1 of appendix B to part 60 for the COMS and/or continuous temperature monitor at the inlet to the main stack electrostatic precipitator, (ESP), bypass baghouse, and cooler vent baghouse;

2. Perform necessary corrective action for the COMS and continuous temperature monitor at the inlet to the main stack ESP, bypass baghouse, and cooler vent baghouse;

3. Maintain files of quality control program data, including periodic checks, audits, and corrective action data; and

4. Ensure spare parts for the COMS and continuous temperature monitor at the inlet to the main stack ESP, bypass baghouse, and cooler vent baghouse are maintained at the plant.

E. Control Room Operator

The Control Room Operator has the overall responsibility of monitoring the continuous opacity and temperature measurements at the inlet to the main stack ESP, bypass baghouse, and cooler vent baghouse. Specific duties of the Control Room Operator might include:

1. Monitor COMS fault warning systems and alarms;

2. Periodically check the data acquisition and management system computer to verify that the computer is operational;

3. Checks to ensure that the three-hour rolling average temperature measured at the inlet to the main stack ESP and bypass baghouse, is within applicable operating limits;

4. Checks to ensure that the three-hour rolling average temperature measured at the inlet to the main stack ESP and bypass baghouse is calculated anew each time the raw mill is changed from on to off, or from off to on; and

5. Reports any alarms, computer fault messages, malfunctions, process upsets, missing or erroneous data, or process problems that impair the ability of the in-line kiln / raw mill system to meet or demonstrate compliance with applicable opacity or operating parameter limits to the Production Manager.

F. Environmental Manager

The environmental manager has the overall responsibility of ensuring compliance with all federal, state, and local environmental regulations including the notification, reporting, record keeping requirements of 40 CFR part 63 subparts A and LLL. Specific tasks of the environmental manager might include:

1. Ensure that appropriate plant personnel are familiar with applicable emissions standards and compliance demonstration requirements;

2. Inform plant personnel of the content of the operation and maintenance plan and ensure that the plan is effectively implemented; and

3. Identify the need to update the operation and maintenance plan and revise the plan according to the procedures outlined in section 4.

4. PERIODIC AUDIT OF OMP

A complete review of the O&M plan as well as all appendices including procedures, checklists, forms, and affected source list will be conducted periodically. The suggested frequency for this review is every five years to correspond with the Title V permit renewal process or as otherwise necessary. The review will be coordinated by the Environmental Manager and will include input by the Production Managers, Maintenance Supervisors, and other plant personnel, as necessary. The results of checks, inspections, and maintenance performed during the year will be used as the basis for this review.

A. The goal of this periodic review is to:

1. Update all requirements contained in the OMP to include any changes or additions to Subpart LLL;

2. Update the OMP, as necessary, to reflect current equipment, personnel, regulations, and procedures;

3. Ensure contents of OMP are effective for ensuring compliance with Subpart LLL;

4. Update all appendices or other supporting documents to ensure effective implementation of the procedures in the OMP;

5. Streamline regulatory compliance efforts by coordinating OMP responsibilities with operating or construction permit requirements;

6. Evaluate the frequencies of preventative maintenance activities and determine if individual procedures should be conducted more or less often; and

7. Determine if specific preventative maintenance activities are necessary and sufficient for the current scope of the OMP.

B. This periodic review will ensure that OMP along with all materials used in the implementation of the plan are appropriate for NESHAP compliance while minimizing extraneous activities and resource requirements.

C. Any changes determined to be necessary to the OMP (excluding any appendices, forms, or other material used to implement the plan) will be submitted to the IDNR – Air Quality Bureau – Compliance Section.

D. Notes on Revising the OMP

As required by 40 CFR 63.1350(a), the written operations and maintenance plan must be submitted to the Administrator for review and approval as part of the application for a part 70 permit. The OMP contains all information required by 40 CFR 63.1350. However, the procedures used to implement the OMP are contained in the appendices to the OMP. This structure allows the requirements of the OMP to be federally enforceable as intended by 40 CFR 63.1350 while still allowing LCC the flexibility to revise, as necessary, the procedures implementing the OMP.

E. OMP Recordkeeping Requirements

This OMP or the most current version of the OMP must be kept on-site for the life of each 40 CFR 63 Subpart LLL affected source. All records in support of 40 CFR 63 Subpart LLL including notification, records, and reports must be kept on-site for 5 years following the date on which the notification, record, or report is prepared [40 CFR 63.10(b)(1)].

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Approved: .

Revision: 0 .

SYSTEM: In-Line Kiln / Raw Mill and Alkali Bypass

EQUIPMENT: Rotary Kiln and Ball Mill

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy NESHAP Subpart LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

1. INTRODUCTION

A. The cement kiln system is a single dry process rotary kiln equipped with a 4 stage preheater precalciner. The kiln system uses a variety of fuels to provide the thermal input necessary to convert raw materials into clinker. These fuels include fossil fuels (i.e. coal, petroleum coke, etc.) as well as natural gas. The raw materials fed to the kiln process include materials obtained from both on-site and off-site sources. Raw materials may include limestone, clay, sand, alumina, silica, iron ore, and/or other raw material additives.

B. Hot exhaust gases from the rotary kiln pass counter-currently through the downward-moving raw materials in the preheat tower. The hot exhaust gases exiting the preheat tower are cooled in a spray tower before being routed to the main stack ESP or to the raw mill. Exhaust gases entering the raw mill are used as a source of heat for drying raw materials and carrying the crushed materials into cyclones.

C. The kiln exhaust gases exiting the raw mill cyclone are then routed to the particulate matter control device (PMCD), referred to as the main stack ESP. Fines from the cyclone discharge are routed to the Raw Feed Blending and Storage System.

D. The alkali bypass is an exhaust gas takeoff from the base of the preheater. After the combustion gasses pass through the kiln, the alkali bypass removes part of the gas stream. This is necessary because sulfur and alkalis recycle in the gas stream. The alkali bypass purges sulfur and alkalis from the system so they do not accumulate. Immediately as the gas

enters the alkali bypass, the gas is quenched with ambient air to cool the gas and precipitate the vapors in the gas stream. The gas then passes through a spray tower followed by a bag house before exiting out the bypass stack.

2. REGULATORY OVERVIEW

Standards affecting the in-line kiln/raw mill system include limits on particulate matter (PM), opacity, and dioxins and furans (D/F).

A. Particulate Matter (PM)

PM emissions from the in-line kiln/raw mill system are limited as a surrogate for HAP metals including arsenic, cadmium, chromium and lead. PM emissions from the in-line kiln/raw mill and alkali bypass are limited to 0.15 kg PM per Mg (0.30 lb per ton) of kiln feed (dry basis).

B. Dioxins and Furans (D/F)

D/F emissions from the in-line kiln/raw mill system and alkali bypass are limited to:

1. 0.20 ng per dscm ($8.7x10^{-11}$ gr per dscf) (TEQ) corrected to seven percent oxygen; or

2. 0.40 ng per dscm ($1.7x10^{-10}$ gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 °C (400 °F) or less.

C. Opacity

Opacity from the in-line kiln/raw mill system and alkali bypass is limited to 20 percent based on a six-minute average.

D. Temperature

The temperature of the kiln exhaust gases at the inlet to the particulate matter control device is limited according to the average of the run average temperatures measured during the most recent performance test conducted in accordance with 40 CFR 63.1349(b)(3). This performance testing must be repeated every 30 months.

During performance testing, temperature limits are established for two modes of operation, (1) raw mill on and (2) raw mill off. Compliance with the temperature limits are based on a three-hour rolling average period that begins anew each time the operating mode is changed from on to off, or from off to on.

The operating temperature limit of the kiln exhaust gases at the inlet to the particulate matter control device in the alkali bypass system must not exceed is limited according to the average of the run average temperatures measured during the most recent performance test conducted in accordance with 40 CFR 63.1349(b)(3) with the raw mill on.

3. OPERATING PROCEDURES

A. Dioxin / Furan and Temperature at PMCD Inlet

On-going compliance with the D/F limit will be achieved by operating the in-line kiln / raw mill system below the operating limits set during the most recent D/F performance test on the maximum temperature measured at the inlet to the particulate matter control device. The temperature at the inlet to the main stack ESP and the alkali bypass is regulated by spray towers. The spray towers cool kiln exhaust gases by introducing tiny water droplets into the air stream.

Proper operation of the spray towers in cooling kiln exhaust gas is achieved through automatic controls that regulate the water feed rate. Once the spray cooler has been started and operation has stabilized as outlined in the Startup, Shutdown, and Malfunction Plan, little additional operator attention is required.

The temperature of the kiln exhaust gas at the inlet to the ESP and alkali bypass are continuously monitored as required by 40 CFR 63.1350(f)(1). These readings are used as an indicator of proper operation of the spray tower.

B. Particulate Matter and Opacity

The affected source will ensure on-going compliance with the particulate matter and opacity limits by properly operating the particulate matter control device, ESP and alkali bypass baghouse, at all times that the kiln and/or roller mill are in operation. The ESP and alkali bypass baghouse operate under negative pressure. The key operating parameters affecting particulate matter emissions and opacity are given below.

1. Kiln / Raw Mill ESP

a) Operating Temperature.

The upper gas temperature of the kiln exhaust gases entering the baghouse must be maintained below 500 °F to ensure that the integrity of the fabric filter material (filament glass or similar) is maintained. The lower gas temperature of the kiln exhaust gases entering the baghouse must be maintained above the dew point of water and hydrochloric acid (180 °F) to prevent condensation. Condensation must be avoided to prevent corrosion, bag blinding, and cake-release problems.

The temperature of the kiln exhaust gases at the inlet to the Main Baghouse are continuously monitored as required by 40 CFR 63.1350(f)(1).

b) ESP Voltage

Each of the 3 ESP fields can be individually controlled by adjusting the Voltage to most effectively clean the gas passing through the field based on the dust load. The Voltage electrically charges closely spaced large plates in the ESP. The Voltage for each field is maintained at 65 KV during normal operation. This requires little or no attention once the set point is determined.

c) ESP Charged Plate Cleaning

Once the particles are attracted to the charged plates in the ESP. The plates in each field are cleaned on a timed basis. The plates are hammered by a motor driven cam on top of each field. The frequency of the plate cleaning can be adjusted and they should be timed so that they do not interfere with the cleaning time of downstream fields creating an opacity spike that corresponds with the cleaning cycle. Once the cleaning timing and frequency are set they require little or no attention when working properly.

d) Negative Pressure at ESP Inlet

Vacuum indication at the kiln baghouse inlet is monitored by the console operator during operation as an indicator of proper operation of in-line kiln/raw mill exhaust containment.

2. Alkali Bypass Baghouse

a) Operating Temperature.

The upper gas temperature of the kiln exhaust gases entering the baghouse must be maintained below 500 °F to ensure that the integrity of the fabric filter material (filament glass or similar) is maintained. The lower gas temperature of the kiln exhaust gases entering the baghouse must be maintained above the dew point of water and hydrochloric acid (180 °F) to prevent condensation. Condensation must be avoided to prevent corrosion, bag blinding, and cake-release problems.

The temperature of the kiln exhaust gas at the inlet to the alkali bypass is continuously monitored as required by 40 CFR 63.1350(f)(1).

b) Pressure Drop.

The baghouse is operated to maintain a pressure drop across the system within a range of 6 to 12 in. w.c. The pressure drop is an indication of filter cake formation that impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain a desired pressure drop rang however, the pressure drop is affected by the dust load and draft passing through the bags.

c) Bag Cleaning Air Pressure

The plenum pulse cleaning air pressure is maintained at 60 to 100 psig to allow for proper cleaning of the bags. The cleaning pressure is released on timed intervals to clean the dust collection bags.

d) Negative Pressure at Baghouse Inlet

Vacuum indication at the kiln baghouse inlet is monitored by the console operator during operation as an indicator of proper operation of bypass exhaust containment.

4. MAINTENANCE AND INSPECTION PROCEDURES

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1350(a)(3).

A. Rotary Kiln and Preheater

1. Annual Combustion System Inspection

40 CFR 63.1350(a)(3) requires the combustion system of the kiln be inspected at least once per year. The purpose of the annual inspection is to ensure good combustion and thus limit primary formation of D/F in the kiln. Primary D/F formation in the kiln occurs as a result of insufficient oxygen, poor mixing, low temperature, and short residence time. The following inspection procedures are conducted annually to ensure that the specific components of the combustion system that control these factors are sufficient for maintaining good combustion practices.

a. Inspect burner for erosion, corrosion, plugging, or other alterations that may adversely affect performance.

b. Check air supply and burner condition.

c. Inspect Coal Conveying system

d. Inspect burner valves and piping

The results of this annual inspection must be included in the Semi-Annual Summary Report required by 40 CFR 63.10(e)(3)(vi) if the inspection was conducted during the reporting period. [40 CFR 63.1354(b)(9)(iv)]

2. Periodic Inspection and Preventative Maintenance Procedures

a. During operation of the rotary kiln, the preheat tower is periodically inspected to prevent plugging to the extent possible.

b. Preventative maintenance procedures include cleaning of the preheat tower by plant operators, as necessary, to avoid plugging.

c. Frequency of preheat tower inspections for plugging will vary depending on maintenance and malfunction history. As a general guideline, inspections are routinely scheduled during each shift.

B. ESP

1. Monthly Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of the ESP that are critical to the ability of the ESP to achieve applicable emission limits.

a. Verify that the ESP and immediate ductwork are free of leaks.

b. Verify that the following ESP components are operational: plate cleaning mechanism, fans, timing controls, and dust removal system.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on a monthly basis.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of the ESP that are critical to achieve applicable emission limits.

a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage);

b. Check the cleaning sequence of the ESP collection plates;

c. Inspect plates for wear.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on an annual basis.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replacement of electrical components;

b. Repair/replace leaks in the containment structure of the dust collector or immediate ductwork.

C. Alkali Bypass Dust Collector

1. Monthly Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of the bypass baghouse that are critical to the ability of the baghouse to achieve applicable emission limits.

a. Verify that the bag cleaning system for each compartment in use is functioning.

b. Verify that the dust collector and immediate ductwork are free of leaks.

c. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on a monthly basis.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of the main baghouse that are critical to the ability of dust collector to achieve applicable emission limits.

a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage);

b. Check the cleaning sequence of the dust collector;

c. Inspect bags for leaks and wear.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on an annual basis.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replacement of filter bags;

b. Repair/replace leaks in the containment structure of the dust collector or immediate ductwork.

D. Spray Cooling Systems

1. Periodic Inspection Procedures

Continuous monitoring of the temperature of kiln exhaust gases at the inlet to the Main Baghouse serves as an indicator of proper operation of the Spray Tower. If temperature spikes are consistently observed, the following inspection procedures of certain components of the Spray Tower may be used to identify the appropriate preventative maintenance needs of the system.

a. Verify that water supply system is functioning;

b. Check for proper operation of water supply pumps and water line (i.e. check for blockage and leakage);

c. Check recirculating water system for plugging;

d. Verify that pressure drop indicators are functioning and check pressure drop as an indicator of plugging in pipes, manifolds, and spray nozzles.

2. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replace leaks, cracks, and loose fittings;

b. Clean out plugged pipes, manifolds, spray nozzles, etc.;

5. MONITORING PROCEDURES

The monitoring procedures outlined below are consistent with Subpart LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(c) and (f).

A. Continuous Opacity Monitor System (COMS)

As required by 40 CFR 63.1350(c)(1), a continuous opacity monitor system is used as an indicator of compliance with the opacity standards for the in-line kiln / raw mill system and alkali bypass. The COMS is calibrated, operated, and maintained in accordance with the provisions of 40 CFR part 63 subpart A and PS-1 of appendix B to part 60.

B. Temperature Monitor

As required by 40 CFR 63.1350(f), a continuous monitor is used to record the temperature of kiln exhaust gases at the inlet to the ESP and alkali bypass. The following guidelines are followed when determining compliance with the temperature limit (3-hour rolling average) on the kiln exhaust gases at the inlet to the particulate matter control device -

1. The three-hour rolling average is calculated as the average of 180 successive one-minute average temperatures.

2. Periods of time when one-minute averages are not available are ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

3. When the operating status of the raw mill is changed from off to on, or from on to off, the calculation of the three-hour rolling average temperature begins anew, without considering previous recordings.

Calibration of the thermocouple used to monitor compliance with the NESHAP operating limits must be verified at least once every three months.

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SYSTEM: Clinker Cooler

EQUIPMENT: Clinker Cooler

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy NESHAP Subpart LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

1. INTRODUCTION

A. The clinker cooler forces ambient air through moving grates on the floor of the cooler that move hot clinker through the cooler as it exits the rotary kiln. The ambient air cools the clinker as it is forced up through the clinker bed. The hot air that passes through the clinker bed is preheated and used for combustion air in the kiln system. The excess air is removed from the cooler through the cooler vent system.

B. The cooler vent system draws heated air from the cooler. The heated air passes through an air to air heat exchanger and then through a baghouse before the air exits through the cooler vent stack.

2. REGULATORY OVERVIEW

Standards affecting the clinker cooler include limits on particulate matter (PM) and opacity.

A. Particulate Matter (PM)

PM emissions from the clinker cooler are limited as a surrogate for HAP metals including arsenic, cadmium, chromium and lead. PM emissions from the in-line kiln/raw mill are limited to 0.050 kg PM per Mg (0.30 lb per ton) of kiln feed (dry basis).

B. Opacity

Opacity from the in-line kiln/raw mill system is limited to 10 percent based on a six-minute average.

3. OPERATING PROCEDURES

A. Particulate Matter and Opacity

The affected source will ensure on-going compliance with the particulate matter and opacity limits by properly operating the particulate matter control device, the cooler vent baghouse, at all times that the kiln is in operation. The cooler vent baghouse operates under negative pressure with an air cleaning mechanism. The key operating parameters of fabric filter control systems affecting particulate matter emissions and opacity are given below.

1. Pressure Drop.

   The baghouse is operated to maintain a pressure drop across the system. The pressure drop is an indication of filter cake formation that impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain a desired pressure drop range.

2. Cleaning Air Pressure.

   The cleaning pressure is maintained between 60 to 100 psig to allow for proper cleaning of the bags.

3. Negative Pressure at Baghouse Inlet

   Vacuum indication at the kiln baghouse inlet is monitored by the console operator during operation as an indicator of proper operation of cooler vent exhaust containment.

4. MAINTENANCE AND INSPECTION PROCEDURES

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards.

A. Dust Collector

1. Monthly Inspection Procedures

   The following inspection procedures have been developed to ensure proper maintenance of certain components of the cooler vent baghouse that are critical to the ability of the baghouse to achieve applicable emission limits.

   a. Verify that the dust collector, air to air heat exchanger, and immediate ductwork are free of leaks.

   b. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

   The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general

guideline, the periodic inspection procedures listed above are performed on a monthly basis.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of the main baghouse that are critical to the ability of dust collector to achieve applicable emission limits.

a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage);

b. Check the cleaning sequence of the dust collector;

c. Inspect bags for leaks and wear.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed above are performed on an annual basis.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

c. Repair/replacement of filter bags;

d. Repair/replace leaks in the containment structure of the dust collector or immediate ductwork.

5. MONITORING PROCEDURES

The monitoring procedures outlined below are consistent with Subpart LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(d).

C. Continuous Opacity Monitor System (COMS)

As required by 40 CFR 63.1350(d)(1), a continuous opacity monitor system is used as an indicator of compliance with the opacity standards for the clinker cooler. The COMS is calibrated, operated, and maintained in accordance with the provisions of 40 CFR part 63 subpart A and PS-1 of appendix B to part 60.

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SYSTEM: Finish Mill System

EQUIPMENT: Finish Mills 3, 4, 5 and 6

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy NESHAP Subpart LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

1. INTRODUCTION

A. The finish mill system includes four separate milling systems that process clinker and gypsum into a finely ground mixture. The clinker and gypsum are fed to the finish mills via weigh feeders. Ground cement is then discharged from each mill into a bucket elevator that transports the material to a mechanical air separator. The separator segregates the ground cement by particle size and discharges materials meeting the size specification to the Storage and Shipping Department.

B. Each finish mill is equipped with a dust collector to control particulate emissions from the mill sweep and separator.

2. REGULATORY OVERVIEW

Standards affecting the finish mill system include limits on the opacity of discharges from the mill sweep or air separator air pollution control devices.

A. Opacity

Opacity from the mill sweep / air separator air pollution control devices is limited to 10 percent based on a six-minute average.

3. OPERATING PROCEDURES

A. Opacity

The affected sources will ensure on-going compliance with the opacity limit by properly operating each particulate matter control device at all times that the corresponding finish mill is in operation. Each baghouse operates under negative pressure with a reverse air

cleaning mechanism. The key operating parameters of fabric filter control systems affecting the opacity of emissions are given below.

1. Pressure Drop.

   The baghouse is operated to maintain a pressure drop across the system. The pressure drop is an indication of filter cake formation that impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain a desired pressure drop range.

2. Cleaning Air Pressure (#4 Finish Mill)

   The cleaning pressure is maintained between 60 to 100 psig to allow for proper cleaning of the bags.

3. Reverse Air Bag Cleaning Systems (#3,5&6 Finish Mills)

   The bag cleaning air is ambient air drawn into individual compartments in the reverse flow direction of the dust-laden air. The dust-laden air is closed off during this cleaning cycle so that the reverse air cleans the dust cake off of the filter bags. This cleaning cycle must be operating and timed correctly to allow for proper cleaning of the bags.

4. MAINTENANCE AND INSPECTION PROCEDURES

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1350(a)(3).

A. Dust Collectors

1. Monthly Inspection Procedures

   The following inspection procedures have been developed to ensure proper maintenance of certain components of the finish mill system dust collectors that are critical to the ability of each to achieve applicable emission limits.

   The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below are performed each month.

   a. Verify that the dust collector and immediate ductwork are free of leaks;

   b. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of dust collectors that are critical to the ability of each to achieve applicable emission limits.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below are performed on an annual basis.

a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage);

b. Check the cleaning sequence of the dust collector.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replacement of filter bags;

b. Repair/replace leaks in the containment structure of the dust collector or immediate ductwork.

5. PERIODIC MONITORING PROCEDURES

The periodic monitoring procedures outlined below are consistent with Subpart LLL standards and the Settlement Agreement between USEPA and the American Portland Cement Alliance (APCA), Case No. 99-1322. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(e).

A. Visible Emissions Observations

Periodic visual emissions observations in accordance with 40 CFR 63.1350(e) The periodic visual emissions observation requirements of 40 CFR 63.1350(e) are outlined below.

1. Visual emissions observations of the mill sweep and air separator particulate matter control device (PMCD) are conducted each day that the affected source is in operation.

2. The procedures of Method 22 of part 60 will be used for all visual emissions observations.

3. The duration of the Method 22 test is six minutes.

4. If visible emissions are observed, conduct a follow-up Method 22 test within 24 hours of the end of the Method 22 test in which visible emissions were observed (ref. Settlement Agreement between USEPA and APCA, Case No. 99-1322).

a. If visible emissions are observed during the follow-up Method 22 test, conduct a Method 9 test;

b. The duration of the Method 9 test is 30 minutes.

5. The appropriate corrective actions outlined in section 6 below will be initiated within one-hour after any visual emissions observation.

6. CORRECTIVE ACTIONS

The corrective actions provided in this section were developed to satisfy the requirements of 40 CFR 63.1350(e)(1). The procedures outlined below must be initiated within one-hour of observing visual emissions as outlined in 40 CFR 63.1350(e).

A. Immediate Response Procedures

The following actions will be taken within one-hour of observing visual emissions following the Method 22 procedures.

1. Record the time and location of the visual emissions observation;

2. Inform environmental manager (or other responsible personnel) of the occurrence of a visual emissions observation including time and location;

3. Initiate all appropriate inspection procedures listed in section 4 above.

B. Subsequent Response Procedures

The following response procedures will be initiated if the Method 9 test conducted as a result of two consecutive visual emissions observations indicates an excedence of the opacity limit.

1. Based on the results of the inspection, initiate maintenance as appropriate; and

2. Record duration of excess emissions event and maintenance performed on the particulate matter control device as required by 40 CFR 63.10(b)(2).

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SYSTEM: Storage and Material Handling Systems

EQUIPMENT: Raw Material, Clinker, Finished Product Storage Bins; Conveying System Transfer Points; and Bulk Loading and Unloading Systems

PURPOSE: The purpose of this procedure is to provide air quality protection measures, achieve emissions limits, and satisfy NESHAP Subpart LLL requirements for development of operations and maintenance procedures. This procedure also explains the regulatory standards, monitoring requirements, and operation, inspection and maintenance procedures necessary to ensure on-going compliance with applicable standards.

1. INTRODUCTION

A. The raw material, clinker, coal, and finished product storage systems consists of both storage silos and surge bins. Affected sources include only those raw material, clinker, and finished product storage bins that meet the EPA definition of a bin. EPA has defined a bin as "a man-made enclosure for storage of raw materials, clinker, or finished product prior to further processing."

B. Emissions from storage bins occur as a result bin loading and unloading as well as entrainment of dust particles from air circulation in the bin. Stack emissions from raw material, clinker, and finished product storage bins are controlled with fabric filter dust collectors.

C. Conveying systems are used to transfer raw materials, solid fuels, clinker, and finished product from one piece of equipment or location to another location within the facility. Affected sources that comprise these systems include feeders, belt conveyors, bucket elevators, and pneumatic systems.

D. Stack emissions from conveying system transfer points are controlled with fabric filter dust collectors. Dust suppression of fugitive sources is sometimes accomplished through the use of enclosures and drop chutes at transfer points.

E. The solid fuel (including coal and coke) received by the facility is transferred to either outside storage piles or to storage in the craneway. The fuel is then conveyed to either the kiln coal mill coal tank or the calciner coal mill coal tank before being conveyed to one of the roller type coal mills.

F. The calciner coal mill is totally enclosed and vents with the kiln exit gasses.

G. Affected sources that are located within buildings that provide a total enclosure are monitored at the extent of the building.

H. The bulk loading and unloading systems include bulk load-out via railcar and truck and the rail car unloading system.

I. Dust generated during bulk loading and unloading is collected and vented to dust collectors. Fugitive emissions from bagging and bulk loading and unloading operations are contained via loading spouts and enclosures to the extent possible.

2. REGULATORY OVERVIEW

Standards affecting the storage and material handling systems include limits on the opacity of discharges from conveyor system transfer points; raw material, clinker, and finished product storage bins; bagging and bulk loading and unloading systems; and dust collectors controlling these sources.

A. Opacity

Opacity from each conveyor system transfer points; raw material, clinker, and finished product storage bins; bulk loading and unloading systems is limited to 10 percent based on a six-minute average.

3. OPERATING PROCEDURES

A. Opacity

Each affected source with uncontrolled emissions that have the potential to exceed the 10 percent opacity limit are equipped with fabric filter control equipment to ensure compliance with the NESHAP standard. As such, affected sources will ensure on-going compliance with the opacity limit by properly operating each particulate matter control device at all times that the corresponding affected source is in operation. A variety of fabric filter dust collectors are utilized depending on the characteristic of the system and emissions being controlled. In each case, however, the key operating parameters of fabric filter control systems affecting the opacity of emissions are the same.

1. Pressure Drop.

The baghouse is operated to maintain a pressure drop across the system. The pressure drop is an indication of filter cake formation that impacts the effectiveness of particulate control. Filter cake formation is function of the bag cleaning cycle. The frequency and duration of bag cleaning is set to maintain the desired pressure drop.

2. Cleaning Air Pressure.

The cleaning pressure is maintained between 60 to 100 psig to allow for proper cleaning of the bags.

4. MAINTENANCE AND INSPECTION PROCEDURES

The maintenance and inspection procedures outlined below focus on those systems that could impact the ability of the affected source to meet applicable Subpart LLL standards. These procedures are also intended to satisfy the requirements of 40 CFR 63.1350(a)(3).

A. Transfer Points and Dust Collectors

1. Monthly Inspection Procedures

The following inspection procedures have been developed to ensure proper maintenance of certain components of affected dust collectors that are critical to the ability of affected sources to achieve applicable emission limits.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below are performed monthly.

a. Verify that all housings and skirting are properly enclosing the affected source.

b. Verify that dust collectors and immediate ductwork are free of leaks;

c. Verify that the following dust collector components are operational: bag cleaning mechanism, fans, timing controls, and dust removal system.

2. Annual Inspection Procedures

The following inspection procedures have been developed for preventative maintenance of certain components of affected dust collectors that are critical to the ability of each to achieve applicable emission limits.

The frequency of these inspection procedures will vary based on historical inspection results, maintenance history, and operating schedule. As a general guideline, the periodic inspection procedures listed below will be performed on an annual basis.

a. Verify integrity of containment structures including housing and piping (i.e. check for wear and/or leakage);

b. Check the cleaning sequence of dust collectors;

c. Inspect bags for leaks and wear.

3. Maintenance Procedures

Depending upon the outcome of periodic inspections, preventative maintenance may be necessary. The specific preventative maintenance measures taken will vary depending upon observations made during periodic inspections and may include any of the following -

a. Repair/replacement of filter bags;

b. Repair/replace leaks in the containment structure of the dust collector or immediate ductwork.

5. PERIODIC MONITORING PROCEDURES

The periodic monitoring procedures outlined below are consistent with Subpart LLL standards. These procedures are intended to satisfy the requirements of 40 CFR 63.1350(e).

A. Visible Emissions Observations

Periodic visual emissions observations in accordance with 40 CFR 63.1350(a) are required for each affected source subject to the provisions of 40 CFR 63.1348. Refer to the Appendix for a list of affected sources and associated control equipment subject to this requirement. Note that this requirement does not apply to totally enclosed conveying system transfer points.

Certain systems that include several affected sources that are contained in the same building or structure will be visually inspected at the extent of the building by method 22 for all operating sources within the building or structure. If Emissions are detected leaving the building or structure then an inspection of each source in the building or structure will be initiated until the source of emissions is identified.

The periodic visual emissions observation requirements of 40 CFR 63.1350(a)(4) are outlined below.

1. Visual emissions observations are conducted periodically while the affected source is in operation. The frequency for visual emissions varies according to the following:

    a. Initially, visual emissions observations must be conducted on each affected source on a monthly basis;

    b. If no visible emissions are observed in six consecutive monthly tests for any affected source, the frequency of visible emissions observations may be decreased from monthly to semi-annually for that affected source.

    c. If no visible emissions are observed during the semi-annual test for any affected source, the frequency of visible emissions observations may be decreased from semi-annually to annually for that affected source.

    d. If visible emissions are observed during any semi-annual or annual test, visible emissions observations of that affected source must resume on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

2. The procedures of Method 22 of appendix A of part 60 will be used for all visual emissions observations.

3. The duration of the Method 22 test is one minute.

4. If visible emissions are observed during any Method 22 test, conduct a 6-minute Method 9 test. The Method 9 test must begin within one hour of any observation of visible emissions.

Appendix C: Applicable Limits and Requirements From 40 CFR 63 Subpart LLL

Applicable Limits and Requirements From 40 CFR 63 Subpart LLL-National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry,

Applicability and designation of affected facility

(a) The affected sources subject to this subpart are:
  (1) Each kiln and in-line kiln/raw mill.
  (2) Each clinker cooler.
  (3) Each raw mill.
  (4) Each finish mill.
  (5) Each raw material dryer.
  (6) Each raw material, clinker, or finished product storage bin.
  (7) Each conveying system transfer point.
  (8) Each bagging system.
  (9) Each bulk loading or unloading system.

(b) The first affected source in the sequence of materials handling operations subject to this subpart is the raw material storage, which is just prior to the raw mill.
The primary and secondary crushers and any other equipment of the on-site nonmetallic mineral processing plant which precedes the raw material storage are not subject to this subpart. Furthermore, the first conveyor transfer point subject to this subpart is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill, emission unit 0300-4-F.
40 CFR 63.1340

Emission Standards and Operating Limits

Standards for kilns and in-line kiln/raw mills.

(a) The permittee shall not cause to be discharged into the atmosphere from any kiln or in-line kiln/raw mill (including any associated alkali bypass) any gases which:
  (1) Contain particulate matter in excess of 0.15 kg per metric ton (0.30 lb. per ton) of feed (dry basis) to the kiln.
  (2) Exhibit greater than 20 percent opacity.
  (3) Contain D/F (tetra-, penta-, hexa-, hepta-, and octa-chlorinated dibenzo dioxins and furans) in excess of:
    (i) 0.20 ng per dscm (8.7E-11 gr per dscf) (TEQ) corrected to seven percent oxygen: or
    (ii) 0.40 ng per dscm (1.7E-10 gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to particulate matter control device is 204 ^{o}C (400 ^{o}F) or less.
    40 CFR 63.1343(b)

Operating limits for kilns and in-line kiln/raw mills

(a) The permittee must operate the in-line kiln/raw mill such that:
  (1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section

and established during the performance test when the raw mill was operating is not exceeded.

(2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was not operating is not exceeded.

(3) The applicable temperature for the alkali bypass, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating is not exceeded.

(b) The temperature limit for affected sources meeting the limits of paragraphs (a)(1) through (a)(3)of this section is determined in accordance with **paragraph (b)(3)(iv) of *Performance testing requirements.***

40 CFR 63.1344

Standards for clinker coolers

(a) The permittee shall not cause to be discharged into the atmosphere from any clinker cooler any gases which:

(1) contain particulate matter in excess of 0.050 kg per Mg (0.10 lb per ton) of feed (dry basis) to the kiln.

(2) exhibit opacity greater than ten (10) percent.

40 CFR 63.1345

Standards for new and reconstructed raw material dryers

The permittee shall not cause to be discharged into the atmosphere from any new or reconstructed raw material dryer any gases which exhibit opacity greater than ten (10) percent.

40 CFR 63.1346

Standards for raw and finish mills

The permittee shall not cause to be discharged into the atmosphere from the mill sweep or air separator air pollution control devices of any raw or finish mill any gases which exhibit opacity greater than ten (10) percent.

40 CFR 63.1347

Standards for affected sources other than kilns; in-line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills

The permittee shall not cause to be discharged into the atmosphere from any new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; or any existing raw material dryer any gases which exhibit opacity in excess of ten percent.

40 CFR 63.1348

Monitoring and Compliance Provisions

Performance testing requirements

(a) The owner or operator shall demonstrate initial compliance with the above listed emission

limits using the test methods and procedures in paragraph (b) of this section and 40 CFR 63.7. Performance tests shall be documented in complete test reports that contain the information required by paragraphs (a)(1) through (a)(10) of this section, as well as other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.

(1) A brief description of the process and the air pollution control system;
(2) Sampling location description(s);
(3) A description of sampling and analytical procedures and any modifications to standard procedures;
(4) Test results;
(5) Quality assurance procedures and results;
(6) Records of operating conditions during the test, preparation of standards, and calibration procedures;
(7) Raw data sheets for field sampling and field and laboratory analyses;
(8) Documentation of calculations;
(9) All data recorded and used to establish parameters for compliance monitoring; and
(10) Any other information required by the test method.

(b) Performance tests to demonstrate compliance with this subpart shall be conducted as specified in paragraphs (1) to (4) of this section.

(1) The permittee shall demonstrate initial compliance for in-line kiln/raw mill particulate matter emissions by conducting separate performance tests as specified in paragraphs (b)(1)(i) to (b)(1)(iii) of this section while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The permittee shall demonstrate initial compliance for clinker cooler particulate matter emissions by conducting a performance test as specified in paragraphs (b)(1)(i) to (b)(1)(iii) of this section. The opacity exhibited during the period of the Method 5 of Appendix A CFR Part 60 performance tests required by paragraph (b)(1)((i) of this section shall be determined as required in paragraphs (b)(1)(i) through (iv) of this section. EPA Method 5 of Appendix A CFR Part 60 shall be used to determine Particulate Matter (PM) emissions. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the represented performance conditions in accordance with 40 CFR 63.7(e).

(i) Each run shall be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance.

(ii) Suitable methods shall be used to determine the in-line kiln/raw mill feed rate, except for fuels, for each run.

(iii) The emission rate, E, of PM shall be computed for each run using:

$$E=(C_sQ_{sd})/P$$

Where:

E = emission rate of particulate matter, kg/Mg of kiln feed.
C_s = concentration of PM, kg/dscm.
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr.
P = total kiln feed (dry basis), Mg/hr.

(iv) The opacity exhibited during the Method 5 test required by(b) (1)(i) above shall

be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run and used to demonstrate initial compliance with the applicable opacity limits of the kiln/raw mill.

(2) The owner or operator of any affected sources subject to limitations on opacity under this subpart that is not subject to (b)(1) of this section shall demonstrate initial compliance with the affected source opacity limit by conducting a test in accordance Method 9 of Appendix A CFR Part 60. The performance test shall be conducted under the conditions that exist when the affected source is operating at the represented performance conditions in accordance with 40 CFR 63.7(e). The maximum six-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in compliance with the standard. The duration of the Method 9 performance test shall be

3-hours (30 6-minute averages), except that the duration of the of the Method 9 performance test may be reduced to 1-hour if (a) there are no individual readings greater than 10 percent opacity, and (b) there are no more than three readings of 10 percent for the first 1-hour period.

(3) The owner or operator of an affected source subject to limitations on D/F emissions shall demonstrate initial compliance with the D/F emission limit by conducting a performance test using Method 23 of Appendix A CFR Part 60. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.

(i) Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the affected source is operating at the represented performance conditions in accordance with 40 CFR 63.7(e) The duration of each run shall be at least three hours and the sample volume for each run shall be at least 2.5 dscm (90 dscf). The concentration shall be determined for each run and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.

(ii) The temperature at the inlet to the kiln/raw mill Particulate Matter Control Device (PMCD), and the temperature at the inlet to the alkali bypass PMCD must be continuously recorded during the period of the Method 23 test, and the temperature records must be included in the performance test report.

(iii) One-minute average temperatures must be calculated for each minute of each run of the test.

(iv) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with paragraph (b) of *Operating limits for kilns and in-line kiln/raw mills*.

(c) Except as provided in paragraph (e) of this section, performance tests required under paragraph (b)(1) shall be repeated every five years, except that the initial performance test of opacity for the in-line kiln/raw mill and clinker cooler is not required.

(d) Performance tests D/F required under paragraph (b)(3) of this section shall be repeated every 30 months.

(e) (1) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable D/F standard under this subpart, the source must conduct a performance test and establish new temperature limit(s) as specified in paragraph (b)(3) of this section.

(2) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable PM standard under §63.1343, the source must conduct a performance test as specified in paragraph (b)(1) of this section.

(3) In preparation for and while conducting a performance test required in paragraph (e)(1) of this section, a source may operate under the planned operational change conditions for a period not to exceed 360 hours. Provided that the conditions in paragraphs (e)(3)(i) through (iv) of this section are met. The source shall submit temperature and other monitoring data that are recorded during the pretest operations.

(i) The source must provide the administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph shall include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under paragraph (e)(1) of this section, including when the planned operational change period would begin.

(ii) The performance test results must be documented in a test report according to paragraph (a) of this section.

(iii) A test plan must be made available to the Administrator prior to testing, if requested.

(iv) The performance test must be conducted, and it must be completed within 360 hours after the planned operational change period begins.

(f) The table below provides a summary of the performance test requirements of this section. *40 CFR 63.1349*

Summary of Performance Test Requirements

Affected source and pollutant	Performance test
New and existing kiln and in-line kiln/raw mill PM	EPA Method 5[(1)]
New and existing kiln and in-line kiln/raw mill Opacity	COM
New and existing kiln and in-line kiln/raw mill D/F	EPA Method 23[(2)]
New and existing clinker cooler PM	EPA Method 5[(1)]
New and existing clinker cooler Opacity	COM
New and existing raw and finish mill Opacity	EPA Method 9[(1)]
New and existing raw material dryer and materials handling processes(raw material storage, clinker storage, finished product storage, conveyor transfer points, baging, and bulk loading and unloading systems) Opacity	EPA Method 9[(1)]

[(1)] Required initially and every five (5) years thereafter.
[(2)] Required initially and every 30 months thereafter.

Monitoring requirements

(a) The owner or operator of this facility shall prepare for each affected source subject to the provisions of this subpart, a written operations and maintenance plan. The plan shall be submitted to the Administrator for review and approval as part of the application for a part 70 permit and shall include the following information:

(1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits listed above under *Emission Standards and Operating Limits*;

(2) Corrective actions to be taken when required by paragraph (e) of this section;

(3) Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln/raw mill located at the facility at least once per year; and

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under *Standards for new and reconstructed raw material dryers*, and *Standards for affected sources other than kiln;, in-line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills*. Such procedures must include the provisions of (a)(4)(i) through (a)(4)(iv) of this section.

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A of 40 CFR 60. The test must be conducted while the affected source is in operation.

(ii) If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A of 40 CFR 60. The Method 9 test must begin within one hour of any observation of visible emissions.

(v) The requirement to conduct a Method 22 visible emissions monitoring under this subsection shall not apply to any totally enclosed conveying system transfer point regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom.

(vi) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the portland cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of (i) to (iv), above, for each conveying system transfer point within the building or for the building itself, according to (vii) below.

(vii) If visible emissions from a building are monitored, the requirements of (i) through

(iv) above apply to the monitoring of the building, and you must also do the following: Test visible emissions from each side, roof and vent of the building for at least one minute. The test must be conducted under normal operating conditions.

(b) Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph (a) of this section shall be a violation of the standard.

(c) The owner or operator of the kiln or in-line kiln/raw mill shall monitor opacity where emissions are vented from these affected sources and the alkali bypass.
  (1) The owner or operator shall install, calibrate, and continuously operate a continuous opacity monitor (COM) to continuously monitor the opacity of the emissions discharged to the atmosphere. The COM shall be installed, maintained, calibrated, and operated as required by 40 CFR 63 Subpart A *General Provisions*, and according to Performance Specifications 1 (PS-1) of 40 CFR 60, Appendix B.
  (2) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any-minute block period does not exceed 20 percent. If the average opacity for any 6-minute block period exceeds 20 percent, this shall constitute a violation of the standard.

(d) The owner or operator of a clinker cooler shall monitor opacity at each point where emissions are vented from the clinker cooler in accordance with paragraphs (d)(1) and (d)(2) of this paragraph.
  (1) The owner or operator shall install, calibrate, and continuously operate a continuous opacity monitor (COM) to continuously monitor the opacity of the emissions discharged to the atmosphere. The COM shall be installed, maintained, calibrated, and operated as required by 40 CFR 63 Subpart A *General Provisions*, and according to Performance Specifications 1 (PS-1) of 40 CFR 60, Appendix B.
  (2) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard.

(e) The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and separator PMCDs of these affected sources, in accordance with the procedures of Method 22 of 40 CFR 60, Appendix A . The Method 22 test shall be conducted while the affected source is conditions that exist when the affected source is operating at the represented performance conditions in accordance with 40 CFR 63.7(e). The duration of the Method 22 test shall be six minutes. If visible emissions are observed during the Method 22 visible emissions test, the owner or operator must:
  (1) Initiate, within one-hour, the corrective actions specified in the site specific operations and maintenance plan developed in accordance with paragraphs (a)(1) and (a)(2) of this section; and
  (2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a visual opacity test of each stack from which visible emissions were observed in accordance with Method 9 of 40 CFR 60, Appendix A. The duration of the Method 9 test shall be thirty minutes.

(f) The owner or operator of an affected source subject to a limitation on D/F emissions shall monitor D/F emissions in accordance with paragraphs (f)(1) through (f)(6) of this section.

(1) The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PM control devices.

(i) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in (b)(3)(iv) of *Performance testing requirements*.

(ii) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(2) The owner or operator shall monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to the kiln, in-line kiln/raw mill and/or alkali bypass PMCD.

(3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

(5) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average temperature must begin anew without considering previous readings.

(6) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

(g) The owner or operator of any kiln or in-line kiln/raw mill subject to a D/F emission limit under this subpart shall conduct an inspection of the components of each kiln or in-line kiln/raw mill at least once per year.

(h) The owner or operator of an affected source subject to a limitation on opacity under *Standards for new and reconstructed raw material dryers*, and *Standards for affected sources other than kiln;, in-line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills* shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with paragraph (a) of this section.

(i) The owner or operator of an affected source subject to a particulate matter standard under *Standards for kilns and in-line kiln/raw mills* shall install, calibrate, maintain and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. The compliance deadline for installing the PM CEMS and all requirements relating to performance of the PM CEMS and implementation of the PM CEMS is deferred pending further rulemaking.

(j) An owner or operator may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of this subpart, except for emission standards for THC, subject to the provisions of paragraphs (j)(1) to (j)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless the owner or operator documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved during the performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.
(2) If the application to use an alternate monitoring requirement is approved, the owner or operator must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.
(3) The owner or operator shall submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (j)(3)(i) through (j)(3)(iii) of this section:
    (i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;
    (ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculateed; and
    (iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.
(4) The Administrator will notify the owner or operator of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternative monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:
    (i) Notice of the information and findings upon which the intended disapproval is based; and
    (ii) Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the owner or operator to provide additional supporting information.
(5) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to prove or disprove the application relieves the owner or operator of the responsibility to comply with any provision of this subpart.
(6) The Administrator may decide at any time, on a case-by-case basis that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart. *40 CFR 63.1350*

Reporting, and Recordkeeping

Reporting requirements

(a) The reporting provisions of subpart A of this part that apply and those that do not apply to

owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a report that contains all of the information required in a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

(b) The owner or operator of an affected source shall comply with the reporting requirements specified in Sec. 63.10 of the general provisions of this part 63, subpart A as follows:

(1) As required by Sec. 63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status.

(2) As required by Sec. 63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by Sec. 63.1349.

(3) As required by Sec. 63.10(d)(4), the owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under Sec. 63.6(i) shall submit such reports by the dates specified in the written extension of compliance.

(4) As required by Sec. 63.10(d)(5), if actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in Sec. 63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and

(5) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

(6) As required by Sec. 63.10(e)(2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by Sec. 63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test.

(7) As required by Sec. 63.10(e)(2), the owner or operator of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under Sec. 63.7 and described in Sec. 63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under Sec. 63.8(e).

(8) As required by Sec. 63.10(e)(3), the owner or operator of an affected source equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.

(9) The owner or operator shall submit a summary report semiannually which contains the information specified in Sec. 63.10(e)(3)(vi). In addition, the summary report shall include:

(i) All exceedences of maximum control device inlet gas temperature limits specified in Sec. 63.1344(a) and (b);

(ii) All failures to calibrate thermocouples and other temperature sensors as required under Sec. 63.1350(f)(7) of this subpart; and

(iii) All failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under Sec. 63.1344(c).

(iv) The results of any combustion system component inspections conducted within the reporting period as required under Sec. 63.1350(i).

(v)All failures to comply with any provision of the operation and maintenance plan developed in accordance with Sec. 63.1350(a).

(10) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report.
40 CFR 63.1354

Recordkeeping requirements

(a) The permittee shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by Sec. 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

(b) The owner or operator shall maintain records for each affected source as required by Sec. 63.10(b)(2) and (b)(3) of this part; and

(1) All documentation supporting initial notifications and notifications of compliance status under Sec. 63.9;

(2) All records of applicability determination, including supporting analyses; and

(3) If the owner or operator has been granted a waiver under Sec. 63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

(c) In addition to the recordkeeping requirements in paragraph (b) of this section, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by Sec. 63.10(c).
40 CFR 63.1355

Temporary, conditioned exemption from particulate matter and opacity standards

(a) Subject to the limitations of paragraphs (b) through (f) of this section, an owner or operator conducting PM CEMS correlation tests (that is, correlation with manual stack

methods) is exempt from:

(1) Any particulate matter and opacity standards of part 60 or part 63 of this chapter that are applicable to cement kilns and in-line kiln/raw mills.

(2) Any permit or other emissions or operating parameter or other limitation on workplace practices that are applicable to cement kilns and in-line kiln raw mills to ensure compliance with any particulate matter and opacity standards of this part or part 60 of this chapter.

(b) The permittee must develop a PM CEMS correlation test plan. The plan must be submitted to the Administrator for approval at least 90 days before the correlation test is scheduled to be conducted.

The plan must include:

(1) The number of test conditions and the number of runs for each test condition;

(2) The target particulate matter emission level for each test condition;

(3) How the operation of the affected source will be modified to attain the desired particulate matter emission rate; and

(4) The anticipated normal particulate matter emission level.

(c) The Administrator will review and approve or disapprove the correlation test plan in accordance with Sec. 63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified in Sec. 63.7(c)(3)(iii), the plan shall be considered approved, unless the Administrator has requested additional information.

(d) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after operations are modified to attain the desired particulate matter emissions concentrations, unless the correlation test plan documents that a longer period is appropriate.

(e) The particulate matter and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for a correlation test, including all runs and conditions.

(f) The owner or operator must return the affected source to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed.

40 CFR 63.1357

Delegation of authority

(a) In delegating implementation and enforcement authority to a State under subpart E of this part, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authority which will not be delegated to States:

(1) Approval of alternative non-opacity emission standards under Sec. 63.6(g).

(2) Approval of alternative opacity standards under Sec. 63.6(h)(9).

(3) Approval of major changes to test methods under Secs. 63.7(e)(2)(ii) and 63.7(f).

A major change to a test method is a modification to a federally enforceable test method that uses unproven technology or procedures or is an entirely new method (sometimes necessary when the required test method is unsuitable).

(4) Approval of major changes to monitoring under Sec. 63.8(f). A major change to monitoring is a modification to federally enforceable monitoring that uses unproven technology or procedures, is an entirely new method (sometimes necessary when the required monitoring is unsuitable), or is a change in the averaging period.

(5) Waiver of recordkeeping under Sec. 63.10(f).

40 CFR 63.1358

Authority for Requirement: 40 CFR 63 Subpart LLL and Subpart A
567 IAC 23.1(4)"bl"

Appendix D: IDNR Air Quality Policy 3-b-08 (Opacity)

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

POLICY/PROCEDURE STATEMENT

TOPIC: Opacity Limits

Policy Procedure Number: 3-b-08 **Replaces Number: None**

Date: **Effective Date:** November 12, 1998

Preparer: David Phelps **Reviewer:**

Approval: **Bureau Chief: Peter Hamlin** **Date:** 11/12/98

Division Administrator: Allan Stokes **Date:** 11/12/98

Applicable Code of Iowa or Iowa Administrative Code Rule: 23.3(2)d

"No person shall allow, cause or permit the emission of visible air contaminants into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, equal to or in excess of 40 percent opacity or that level specified in a construction permit, except as provided below and in 567-Chapter 24."

REASON OR BACKGROUND

The default opacity limit allowed by regulation is 40%. This limit was established with the original regulations in 1970. It is generally accepted that opacity greater than 40% was evidence of a mass emission standard exceedence. More recently, there have been requests from facilities for limits much lower than that allowed by the regulations, in some cases less than 0.01 gr/scf to which a 40% opacity limit does not correspond. Since opacity is used as an indicator of the particulate emission rate, listing an indicated potential problem opacity that is more in line with the mass emission rate is useful. In order to have the authority to set limits lower than 40%, subrule 23.3(2)d was changed. This change allows the department the ability to set opacity limits at a level that more closely corresponds to what would be observed by the source when operating in compliance with its mass emission rate.

Except in the case where a specific opacity limit is established by rule, it has been the general policy of the Department not to take action on opacity limits directly. Rather, if it is felt that a violation of the mass emission rate exists that is not attributable to some abnormal event, a stack test would be required to verify compliance. However, the Department reserves the right to use the results of formal opacity readings as evidence of an exceedence.

DETAILS

It shall be the policy of the Department to list the default opacity as a permit condition and in addition an indicator opacity may be listed.

For ease of proving continual compliance a source may request a 'no visible emissions' opacity limit which allows proof of compliance without having a certified opacity reading taken. In this case any visible emissions would be an exceedence.

The IDNR permit writer may list an opacity that will be a indicator of possible mass emission rate exceedence. If the permitee wishes, the recommended indicator opacity may be changed by demonstrating compliance with the mass emission rate during a stack test while emitting the new desired indicator opacity. If the tested mass emission rate is less than the permitted emission rate, then the desired indicator opacity may be set at a proportionally higher level than observed during the stack test.

If an opacity measurement, taken in accordance with an approved reference method for opacity, (generally USEPA Method 9 or 22) exceeds the indicator opacity then the facility will promptly investigate the source and make corrections. However, if after corrections are made the opacity continues to exceed the indicator opacity the Department may require additional proof to demonstrate compliance with the mass emissions limits.

Recommended indicator opacities shall be:

Grain Loading gr./scf	Recommended Indicator Opacity
<0.01 gr./scf	non specified in permit *
0.01 to 0.06 gr./scf	10% Opacity
0.061 to 0.08 gr./scf	20% Opacity
0.081 to 0.1 gr./scf	25% Opacity

* A line is added to the permit that states: "If visible emissions are observed other that start-up, shut-down, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard."

If a source is a batch process the indicator opacity shall be based on the table above, but the opacity averaging period, for comparison to the indicator opacity, shall be the entire batch cycle. For purposes of comparison to the indicator opacity readings shall be taken during the entire cycle and averaged.

Sources are also given the opportunity to set source specific limits to be coordinated with the initial compliance test. These may then be incorporated into the permit.

In all cases an exceedence of the indicator opacity will require the permitee to file an "indicator opacity exceedence report" to the IDNR regional office. The reporting requirements shall be:

Oral report of excess indicator opacity. An incident of excess indicator opacity (other than an incident of excess indicator opacity during a period of startup, shutdown, or cleaning) shall be reported to the appropriate regional office of the department within eight hours of, or at the start of the first working day following the onset of the of the incident. The reporting exemption for an incident of excess indicator opacity during startup and shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in subrule 25.1(6).

An oral report of excess indicator opacity is not required for a source with operational continuous monitoring equipment (as specified in subrule 25.1(1) if the incident of excess indicator opacity continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity.

The oral report may be made in person or by telephone and shall include as a minimum the following:

a) The identity of the equipment or source operation form which the excess indicator opacity originated and the associated stack or emission point.
b) The estimated quantity of the excess indicator opacity.
c) The time and expected duration of the excess indicator opacity.
d) The cause of the excess indicator opacity.
e) The steps being taken to remedy the excess indicator opacity.
f) The steps being taken to limit the excess indicator opacity in the interim period.

Written report of excess indicator opacity. A written report of an incident of excess indicator opacity shall be submitted as a follow-up to all required oral reports to the department within seven (7) days of the onset of the upset condition, and shall include as a minimum the following:

a) The identity of the equipment or source operation point from which the excess emission originate and the associated stack or emission point.
b) The estimated quantity of the excess indicator opacity.
c) The time and duration of the excess indicator opacity.
d) The cause of the excess indicator opacity.
e) The steps that were taken to remedy and to prevent the recurrence of the incident of excess indicator opacity.
f) The steps that were taken to limit the excess indicator opacity.
g) If the owner claims that the excess indicator opacity was due to malfunction, documentation to support this claim.

Exceptions to this policy:

1) In the case where a facility has an opacity limit established in an existing permit, no change will be made to that permit limit unless the permit is being modified for other purposes.
2) If the facility has a continuous opacity monitor, this policy shall not apply.
3) This policy shall not apply to opacity limits established in Prevention of Significant Deterioration (PSD) permits or permits that were established for maintenance plans for nonattainment areas.
4) This policy shall not apply where an opacity limit is established as an indication of hazardous air pollutants.

5) This policy shall not apply where an opacity limit is established by a rule, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), etc.